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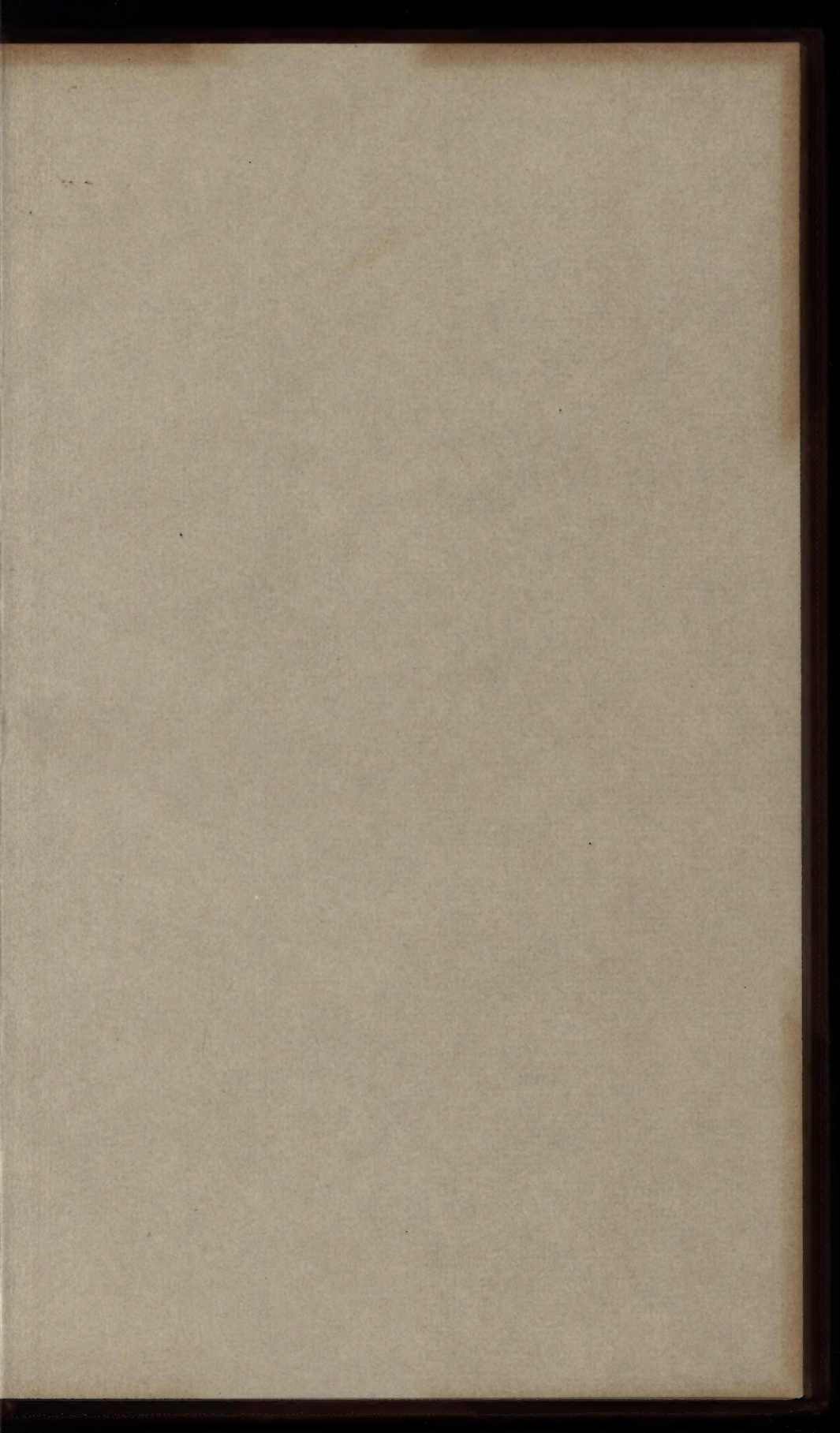
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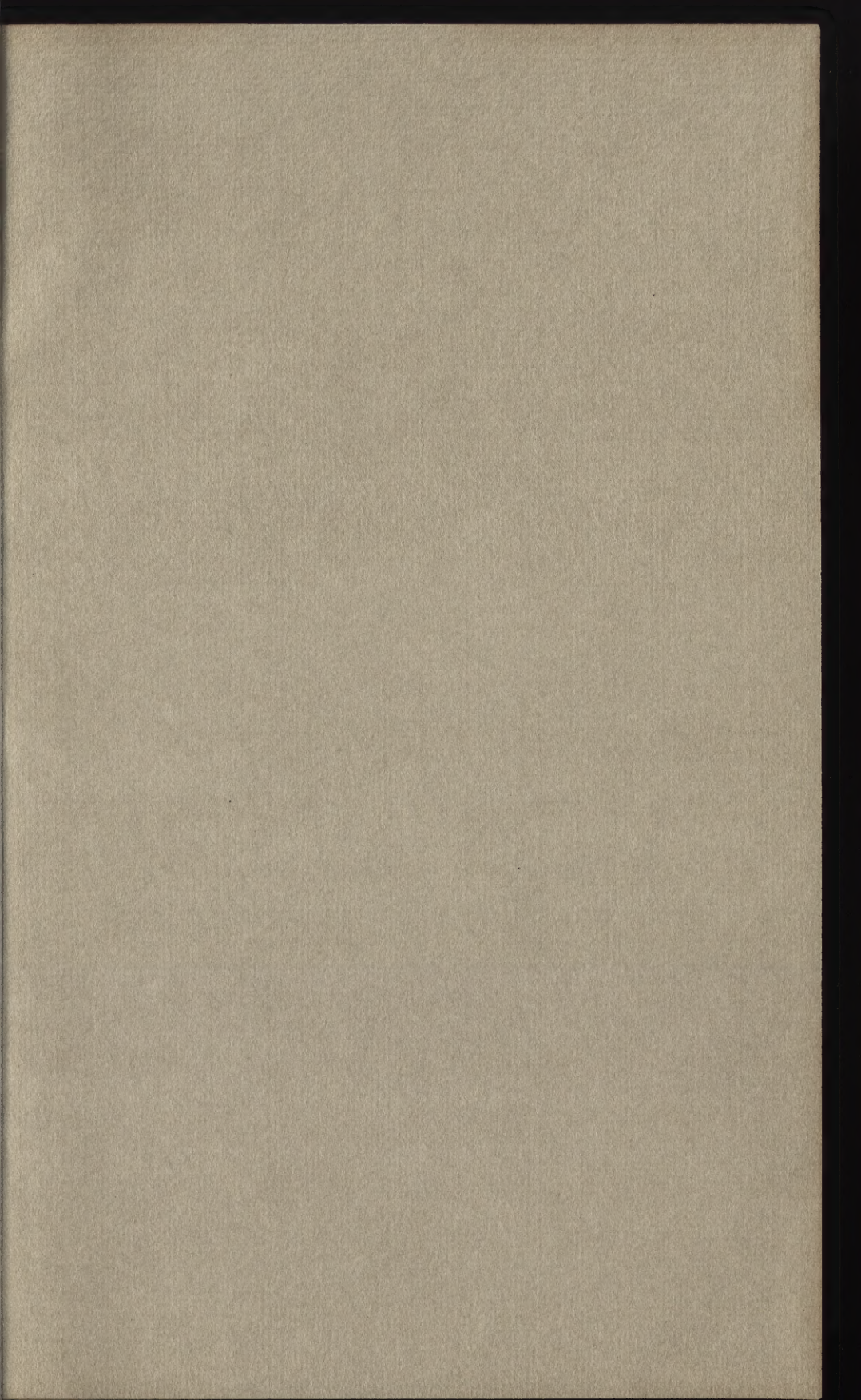


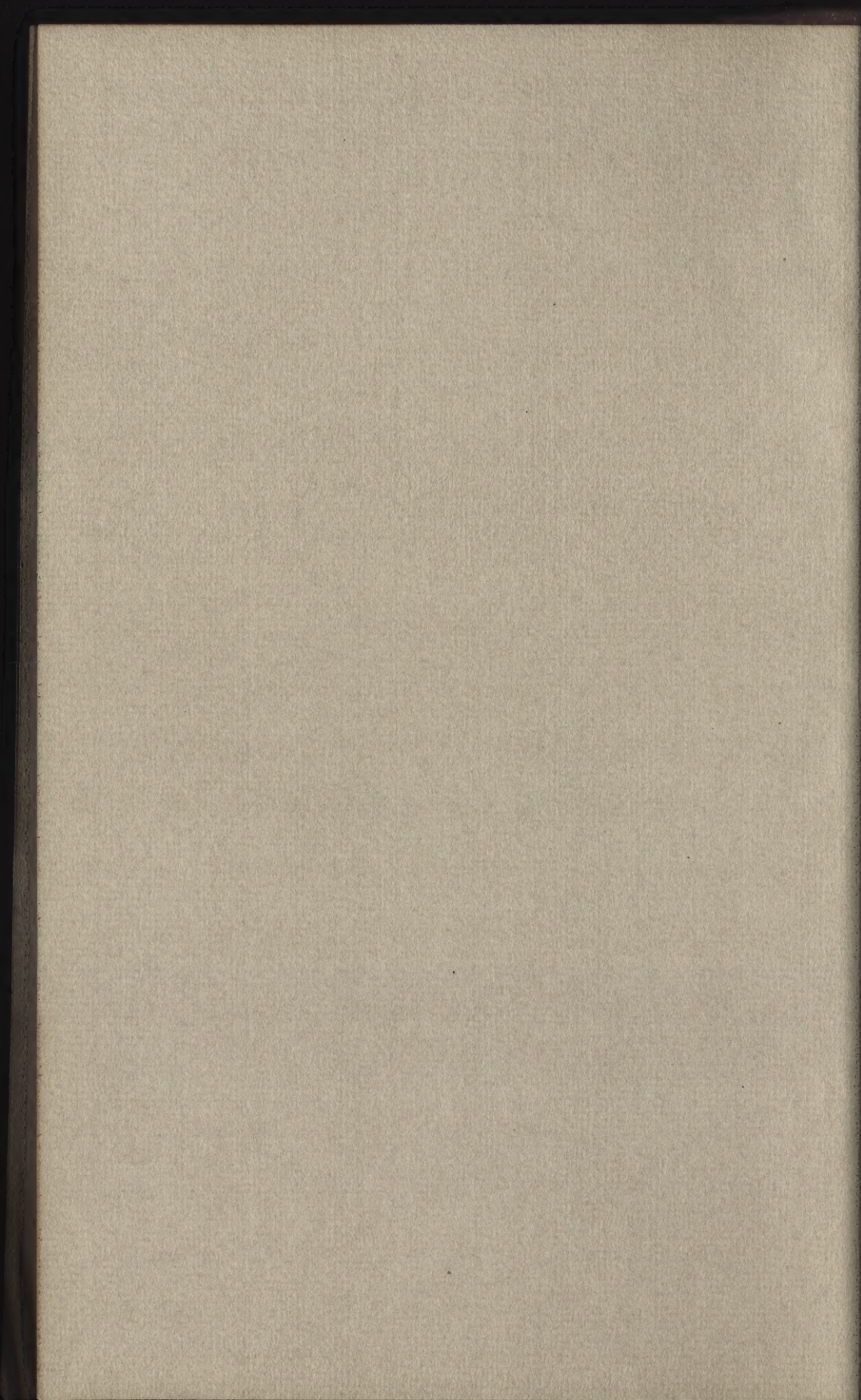
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GERANIACEÆ.

THE

NATURAL ORDER

OF

GERANIA,

ILLUSTRATED BY COLOURED FIGURES AND DESCRIPTIONS;

COMPRISING

THE NUMEROUS AND BEAUTIFUL MULE-VARIETIES CULTIVATED IN
THE GARDENS OF GREAT BRITAIN,

WITH

DIRECTIONS FOR THEIR TREATMENT.

BY ROBERT SWEET, F.L.S.

Author of Hortus Suburbanus Londinensis, Botanical Cultivator, &c. &c.

VOL. I.

LONDON:

PRINTED FOR JAMES RIDGWAY, PICCADILLY.

1820—1822.

GERMAN

NATURAL ORDER

GERMAN

PHOTOGRAPHS FOR THEIR TREATMENT

BY ROBERT SWIFT, F.R.S.

VOL. I.

LONDON

S. Gosnell, Printer, Little Queen Street, London.

BOOKS QUOTED.

- Andrews's ger.* Geraniums, or a monograph of the genus Geranium, by H. C. Andrews. London, 1805, seqq. 4to.
- Andrews's reposit.* The Botanist's repository for new and rare plants, by H. Andrews. London, 1797, seqq. 4to.
- Barr. ic. rar.* Plantæ per Galliam, Hispaniam et Italiam observatæ, iconibus æneis exhibitæ a Jac. Barreliero. Parisiis, 1714. fol.
- Bieberst. fl. taur.* Marschall de Bieberstein Flora Taurico-Caucasica; 1 vol. in 8. Charkoviæ, 1808.
- Bocc. mus.* Museo di piante rare, di Don Paulo Boccone. Venetia, 1697. 4to.
- Bot. mag.* Curtis's Botanical Magazine, continued by James Sims. London, 1787, seqq. 8vo.
- Burm. afric.* Burmann (Johannes), Rariorum Africanarum plantarum Decades 10. Amstelodami, 1738, 1739. 4to.
- Burm. ger.* Burmann (Nicol. Laurent.) De Geraniis specimen, 1 fasc. in 4to. Lugd.-Bat. 1759.
- Cav. diss.* Monadelphix classis dissertationes decem, auctore Ant. Jos. Cavanilles. Parisiis, 1785—Matriti, 1790. 4to.
- Colv. catal.* A Catalogue of Plants sold by Colvill and Son, Nursery and Seedsmen, King's Road, Chelsea, near London, by Robert Sweet, 1821. 12mo.
- Commel. hort.* Horti medici Amstelodamensis rariorum plantarum descriptio et icones, auctore Jo. Commelino. Amstelodamensis, 1697. Pars altera, auctore Casp. Commelino, 1701. fol.
- Commel. præl.* Casp. Commelini præludia botanica. Lugd. Batav. 1703. 4to.
- DC. pl. grass.* De Candolle (Augustin Pyramus), Plantarum historia succulentarum. Fasc. 28. Paris 4to.
- Desf. atl.* Flora Atlantica, auctore Renato Desfontaines. Tomi 2. Parisiis. 4to.
- Dill. elth.* Dillenius (Joh. Jac.), Hortus Elthamensis. Vol. 2. Londini, 1732. fol.
- D. Don prod. Fl. Nepalens.* Don, Prodromus Floræ Nepalensis.

Engl. bot. English Botany, by J. E. Smith, the figures by J. Sowerby. London, 1790, seqq. 8vo.

Ehrh. Beitr. Ehrhart (Friedrich), Beiträge zur naturkunde. Hanover et Osnabruk, 1787, 1792. 8vo.

Flor. dan. Icones plantarum sponte nascentium in regnis Daniae et Norvegiae, editæ a Ge. Chr. Oeder. Oth. Frid. Muller, et Mart. Vahl. Hafniæ, 1761, seqq. fol.

Gouan illustr. Ant. Gouan illustrationes et observationes botanicæ. Tiguri, 1773. fol.

Haw. pl. succ. Haworth (Adrian Hardy), Synopsis plantarum succulentarum. 1 vol. 8vo. Londini, 1812.

Hoare geran. A List of Geraniums in the Conservatories of Sir Richard Colt Hoare, Bart, at Stourhead, Wilts. 1821. 4to.

Hort. Kew. Hortus Kewensis; or, a Catalogue of the Plants cultivated in the Royal Botanic Garden at Kew, the second edition, by William Townsend Aiton. London, 1810, 1813. 5 vol. 8vo.

Hort. sub. lond. Hortus Suburbanus Londinensis; or, a Catalogue of plants cultivated in the neighbourhood of London, by Robert Sweet. 1818. 1 vol. 8vo.

Houtt. syst. Houttuyn (Mart.) Des ritters von Linne Pflanzen system nach der anleitung des Houttuynschen werks. 14 vol. 8vo. Nurnberg, 1777—1788.

Jacq. coll. N. J. Jacquin Collectanea ad Botanicam, Chemiam et Historiam Naturalem spectantia. Voll. 4, et Supplementum. Vindobonæ, 1786—1796. 4to.

Jacq. eclog. Von Jacquin (Jos. Franc.), Eclogæ botanicæ, fasc. in fol. 1811, seqq.

Jacq. hort. schænb. Plantarum rariorum Horti Cæsarei Schœnbrunnensis, descriptiones et icones, opera N. J. Jacquin. Vol. 1. 4. Viennæ, 1797—1804. fol.

Jacq. ic. Icones plantarum rariorum, editæ a N. J. Jacquin. Voll. 3. Vindobonæ, 1781—1793. fol.

Lamarck dict. Encyclopédie méthodique: Botanique, par M. le Chevalier de Lamarck. Paris, 1783, seqq. 4to.

Lamarck ill. Illustration des genres, par M. de Lamarck. Paris, 1791, seqq. 4to.

Lapey. pyren. Figures de la Flore des Pyrenées, par Phil. Picot Lapeyrouse. Tome 1. Paris, 1795. fol.

L'Hérit. Geran. Car. Lud. L'Héritier Geraniologia. Parisiis, 1787, 1788. fol.

Lod. bot. cab. Botanical Cabinet, by Conrad Loddiges and Sons. London, 1817, seqq. 4to. et 12mo.

Martyn dec. Jo. Martyn historia plantarum rariorum centuriæ 1 decas 1-5. Londini, 1728 (1736.). fol.

Nov. comm. gott. Novi Commentarii Societatis Regiæ Scientiarum Gottingensis. Tomi 8. Gottingæ et Gothæ, 1771—1778. 4to.

Park. parad. John Parkinson, Paradisi in Sole Paradisus terrestris, or a garden of flowers. London, 1629. fol.

Pers. syn. Synopsis plantarum, seu Enchiridium botanicum, curante Chr. Henr. Persoon. Parisiis, 1805—1807. 2 vol. 12mo.

Plant. rar. hung. Franc. Comitis Waldstein et Pauli Kitaibel Descriptiones et icones plantarum rariorum Hungariæ. Viennæ. 3 vol. fol. 1802—1812.

Pursh flor. amer. sept. Flora Americæ Septentrionalis, or a Systematic arrangement and description of the Plants of North America, by Frederick Pursh. London. 2 vol. 8vo. 1814.

Roth abh. Botanische abhandlungen und beobachtungen von Albr. Wilh. Roth. Nurnberg, 1787. 4to.

Scop. del. Ant. Joh. Scopoli Deliciæ floræ Insubricæ. 3 vol. fol. Ticini, 1786—1788.

Seb. thes. Alb. Sebæ locupletissimi rerum naturalium thesauri descriptio. Tomi 4. Amstelodami, 1734—1765. fol.

Smith ic. pict. Icones pictæ plantarum rariorum, auctore Jac. Edv. Smith. Fasc. 1—3. London, 1790—1793. fol.

Spreng. nov. prov. C. Sprengel, Novi Proventus Hortorum Academicorum Halensis et Berolinensis. Centuria specierum minus cognitarum, quæ vel per annum 1818, in Horto Halensi et Berolinensi floruerunt, vel siccæ missæ fuerunt. 12mo.

Thuill. fl. par. J. L. Thuillier, Flore des environs de Paris, ed. 1. Paris, 1790. 12mo (ed. 2. Tome 1, 1799. 8vo.)

Thunb. prod. Prodromus plantarum Capensium, quas, in Promontorio Bonæ Spei Africes, annis 1772—1775 collegit C. P. Thunberg. Partes 2. Upsaliæ, 1794—1800. 8vo.

Vent. malm. Jardin de la Malmaison, par E. P. Ventenat. Paris, 1803, seqq. fol.

Vill. dauph. Histoire des plantes de Dauphiné, par M. Villars. Tomes 3. Grenoble, 1786—1789. 8vo.

Wendl. hort. her. Hortus Herrenhusanus, auctore J. C. Wendland. Fascic. 1-4. Hannoveræ, 1798—1801. fol.

Wendl. obs. Botanische beobachtungen, von J. C. Wendland. Hannover, 1798. fol.

Willd. enum. Car. Lud. Willdenow Enumeratio plantarum horti bot. Berolinensis. Berolini, 1809. 2 vol. 8vo.—Suppl. 1813.

Willd. hort. ber. C. L. Willdenow Hortus Berolinensis. Berolini, 1806. fol.

Willden. sp. pl. Car. a Linne Species plantarum, editio quarta, curante C. L. Willdenow. Berolini, 1797—1810. 8vo.

GERANIACEÆ.

GERANIACEÆ. *Calyx* simplex pentasepalus aut quinquepartitus, persistens. *Petala* 2-5 (raro 0.) *Stamina* definita, filamentis basi coalitis, nunc omnia fertilia, nunc quædam sterilia. *Germen* simplex; *stylus* unicus; *stigmata* 5 oblonga. *Fructus* 5-locularis aut 5-capsularis, loculis aut capsulis monospermis. *Corculum* (*Embryo*) absque perispermo (albumine). *Caulis* fruticosus aut herbaceus; *folia* stipulacea (aut rarissime exstipulacea †), opposita aut alterna; *flores* foliis alternis oppositi, oppositis axillares. *Jussieu gen.* 268.

OBS. *Gerania* hinc *Vitibus* inde *Malvaceis* affinia, habitu, staminum monadelphiam et foliis stipulaceis *Malvaceas* referunt, dissimiles tamen embryonis lobis non corrugatis, capsularum aristis stylo applicitis et a basi dehiscentibus, foliis interdum oppositis. Pedunculus multiflorus folio alterno stipulaceo oppositus signum est *Vitibus* et *Geraniis* nonnullis commune; sed *Vitium* habitus paulo dispar, calyx minimus, petala staminibus opposita, germen dissimile et fructus baccatus. An ex *Tropæoli* et *Cissi* cum *Geraniis* comparatione concludenda in his staminum perigynia? *Juss. loc. cit.* 270.

* TRIBUS I. GERANIEÆ. *Cal.* 5-sepalus.

1. **MONSONIA.** *Cor.* 5-petala, incisa. *Stam.* 15, connata: urceolo filamentorum 5-fido. *Stig.* 5, sessilia. *Caps.* 5, monospermæ, aristatæ, ad basin receptaculi rostratæ.
2. **RHYNCHOTHECA.** *Cal.* 5-sepalus. *Stam.* 10. *Styli* breves, appressi. *Stigm.* longa, crassa, divergentia. *Caps.* 5-cocceæ, superne caudatæ, inferne dehiscentes. *Semina* subcarinata. *Receptac.* columnare, 5-gonum.
3. **GERANIUM.** *Cor.* 5-petala, regularis. *Nect.* glandulæ 5 melliferæ, basi longiorum filamentorum adnatæ. *Caps.* 5, monospermæ, aristatæ, ad basin receptaculi rostratæ. Aristis nudis simplicibus (nec spiralibus, nec barbatis).
4. **ERODIUM.** *Cor.* 5-petala. *Nect.* *Squamulæ* 5 cum filamentis alternantes, et *Glandulæ* melliferæ basi staminum insidentes. *Caps.* 5, monospermæ, aristatæ, ad basin receptaculi rostratæ. Aristis spiralibus introrsum barbatis.

** TRIBUS II. GRIELEÆ. *Cal.* 1-sepalus persistens, absque tubo nectarifero.

5. **GRIELUM.** *Cal.* 5-fidus. *Cor.* 5-petala. *Stam.* 10, libera. *Filam.* persistentia. *Caps.* 5, monospermæ.

† *P. discipes.*

*** **TRIBUS III. PELARGONIÆ.** *Cal. 1-sepalus, 5-partitus: lacinia suprema desinente in tubulum capillarem, nectariferum, secus pedunculum decurrentem. Filam. 10, basi connata. Caps. 5, monospermæ, aristatæ. Aristis spiralibus introrsum barbatis.*

6. **PHYMATANTHUS.** *Pet. 5 inæqualia: duo superiora approximata supra unguem verrucosa. Stam. tubo brevissimo: 5 fertilia recurvo-patentia; 5 sterilium duo superiora paulo elongata recta.*

7. **CAMPYLIA.** *Pet. 5 inæqualia: duo superiora majora: ungues margine inferiore auriculati. Stam. 5 sterilia: duo superiora longiora hamata recurva.*

8. **OTIDIA.** *Pet. 5 æqualia: duo superiora superne basi auriculata. Stam. 5 sterilia, duo superiora spatulata aut subulata: 3 inferiora breviora, erecta aut incurva.*

* **SECT. 1.** *Pet. æqualia æquidistantia.*

** **SECT. 2.** *Pet. 2 superiora approximata: inferiora patentia.*

9. **HOAREA.** *Pet. 5 inæqualia, 2 superiora parallela longe unguiculata medio abrupte reflexa. Stam. longe tubulosa petalorum inferiorum longitudine, 5 sterilia recta aut apice incurva, 3 inferiora fertilibus breviora.*

* **SECT. 1.** *Cal. laciniis omnibus recurvis. Fil. sterilibus subulatis rectis.*

*** **SECT. 2.** *Cal. lacinia superiore erecta. Fil. sterilibus apice incurvis.*

10. **DIMACRIA.** *Pet. 5 inæqualia, duo superiora conniventia apice divaricata. Stam. sepalis breviora; 5 fertilia duobus inferioribus duplo longioribus porrectis supremo brevissimo: 5 sterilia minima subæqualia.*

11. **PELARGONIUM.** *Pet. 5 inæqualia, 2 superiora brevi unguiculata approximata. Stam. inæqualia declinata: 3 sterilia subulata.*

* **SECT. 1.** *Monospatalla. Filam. 10, basi connata 3-4 raro 5 sterilia: superiora late spatulata, sterilia aut antherifera.*

† **DIV. 1.** *Caule herbaceo aut suffruticoso patulo, foliis lobatis divisise.*

†† **DIV. 2.** *Caule fruticoso erecto aut flexuoso, foliis reniformibus lobatisque.*

††† **DIV. 3.** *Caule fruticoso nodoso, foliis ternatis.*

** **SECT. 2.** *Pelargonia vera. Filam. inæqualia longe declinata subulata.*

*** **SECT. 3.** *Pet. ligulata. Filam. brevibus suberectis.*

**** **SECT. 4.** *Tubo nectarifero brevissimo. Filam. patentibus.*

- ***** SECT. 5. Filam. *brevissima*, 5-6 *sterilia*. Caulibus *procumbentibus*.
- ***** SECT. 6. Pet. *omnia obovata*. Filam. *subrecto-patentia*. Caule *suffruticoso rugoso*. Stipulis *persistentibus*.
- ***** SECT. 7. Dibrachya. Pet. *superiora majora*. Filamentis *adscendentibus* 2 *superiora brevissima*.
12. JENKINSONIA. Cal. 5-partitus, laciniis patentibus. Pet. 4-5, duo superiora multo majora longe unguiculata basi distantia. Stam. inæqualia adscendentia aut longissimo declinato medio geniculato connata: 5-7 fertilia. Caps. 5 basi valde attenuatæ.
- * SECT. 1. Filam. *longissimo declinato medio geniculato connata*. Caulibus *erectis*.
- ** SECT. 2. Filam. *adscendentia*. Caulibus *procumbentibus*.
13. CICONIUM. Pet. 5 inæqualia, duo superiora approximata minora. Stam. 7 fertilia recta; 2 superiora brevissima.

Besides the Genera that are above enumerated, we believe there are still others to be taken from the overgrown genus of *Pelargonium*. We suspect the Geranium *Grenvilleæ* and *roseum* of Andrews will form a distinct genus, which might be named *Grenvillea*: *Pelargonium Cotyledonis* and *discipes* another, or perhaps two separate ones. *P. discipes* differs materially from all others with which we are acquainted, from its want of stipules. The two former species, we are afraid, are now lost to the collections of this country; the two latter we are in hopes of seeing flower next spring, as strong plants of both are in Messrs. Colvill's collection at Chelsea.



ERRATA.

- No. 1. l. 3. for “;” put “,”
 l. 4. after “cordatis” erase “,” and after “dentalis” for “,” put “;”
- No. 2. l. 4. for “,” insert “;”
 l. 8. for “sterilis” read “sterile.”
- No. 19. l. 12. after “unequal” insert “,”
- No. 20. page 2. l. 8. for “by the leaves of that” read “by its leaves.”
- No. 32. l. 11 from the bottom, for “carlet” read “scarlet.”
- No. 35. l. 3. for “dilatatum” read “oblatum,” and after “oblatis” erase “,”
- No. 39. l. 10 from the bottom, after “unequal” insert “,”
- No. 41. l. 9 from the bottom, for “*Petioles*” read “*Pedicles*.”
- No. 54. p. 2. l. 4. after “obovate” insert “,”
- No. 76. l. 3. before “sanguineum” insert “P.”
- No. 78. on the “plate” for “70” put “78”
- No. 83. p. 2. l. 10 from the bottom, for “netariferous” read “nectariferous.”
- No. 89. l. 4. after “cordatis” erase “,”





PELARGONIUM striatum.

Streak-flowered Stork's-bill.

P. striatum, umbellis capitatis subseffloris; foliis cordatis, leviter quinquelobis dentatis, lobis mucronatis.

Davey's Fairy Queen Geranium. *Hortulanorum*.

Stem shrubby, branching. *Branches* thickly covered with soft woolly hairs. *Leaves* cordate, obsoletely 5-lobed, slightly pubescent on both sides, lobes mucronate, dentate. *Petiole* longer than the leaf, covered with soft hairs. *Stipules* cordate, taper-pointed, fringed. *Peduncles* reaching beyond the leaves, downy. *Umbels* generally 6-flowered. *Involucre* of one bracte, divided into several segments; segments ovate, acute, fringed. *Calyx* 5-cleft; segments lanceolate, taper-pointed, a little longer than the nectariferous tube. *Nectariferous tube* about the length of the pedicle. *Corolla* of 5 petals, the two uppermost largest, obversely ovate, white, with a reddish purple spot in the centre, from which branch numerous lines of the same colour in all directions; lower petals oblong, obtuse, in some specimens quite white, in others marked with red lines. *Filaments* 10 united at the base, 7 only bearing anthers. *Anthers* incumbent, oblong, obtuse, 2-celled, bursting at the front to discharge the pollen. *Pollen* granulate, orange-coloured. *Germen* villous. *Style* hairy, purple. *Stigmas* 5, revolute.

Our drawing of this plant was taken at the nursery of Mr. Davey, King's Road, Chelsea, who calls it the Fairy Queen, an appellation by which it is known in most collections; we suspect it to be of hybrid origin, but between what species it was produced we are at a

loss to guess; it seems nearest related to *P. betulinum*, but has very little affinity with that or any other species with which we are acquainted. Mr. Davey says he raised it from seeds, but is not certain how they were obtained. It is a very handsome plant, and produces abundance of flowers, which make their appearance early in the spring; therefore it is desirable for all collections, particularly as it is not a tall growing plant, and requires but little room; it will thrive well in an equal mixture of good loam and decayed leaves, or any rich vegetable mould, with the protection of a greenhouse or warm room in winter to defend it from frost, when it wants but little water, and plenty of air in mild weather. Cuttings strike root readily, planted in a pot of the same kind of soil; and placed in a shady situation till struck, when they may be planted singly in small pots, and set in any convenient situation,





PELARGONIUM ignescens

Fiery-flowered Stork's-bill.

P. ignescens, pedunculis quadrifloris, foliis cordatis trifidis, laciniis lateralibus bilobis, intermedio trilobodentato, stipulis cordatis acuminatis subdentatis.

Pelargonium ignescens. Hort. sub. lond. p. 151. n. 48.

Geranium ignescens, major. And. ger. cum icone.

β. sterilis, antheris sterilibus, floribus 2-3plo minoribus, tubo nectarifero calyce sesquilongiori.

Pelargonium ignescens. Lod. bot. cab. no. 109.

Geranium ignescens. And. ger. cum icone.

Stem shrubby, with few branches, which when young are succulent and easily broken, and the whole plant is covered with soft villous hairs. *Leaves* cordate, deeply divided into three lobes, in some of them nearly to the base, side lobes slightly 2-lobed, intermediate one 3-lobed, unequally dentate, covered on both sides with a soft down. *Petioles* about the length of the leaf, hairy, a little flattened on the upper side. *Stipules* cordate, acuminate, ciliate, sometimes dentate. *Peduncles* longer than the leaves, hairy, when perfect always 4-flowered. *Involucre* generally of 6 bractes. *Bractes* lanceolately ovate, acuminate, ciliate, densely covered with soft villous hairs. *Calyx* 5-cleft, the back segment twice as large as the others, ovate, erect, the other 4 lanceolate and reflexed, all covered with soft hairs. *Pedicle* about the length of the segments of the calyx. *Nectariferous tube* more than twice the length of the calyx, slightly hairy, and flat on both sides, (in Var. *β.* much shorter, and very hairy). *Corolla* of 5 petals, the two uppermost ovate of a light

scarlet, with a dark spot in the centre, from which branch numerous lines of the same colour; the three lowermost ligulate, of a lighter colour. *Filaments* 10, united at the base, 7 only bearing anthers. *Anthers* incumbent, ligulate, 2-celled, bursting at the front to discharge the pollen. *Pollen* granular, of a brown orange colour. *Germen* villous. *Style* red, slightly hairy. *Stigmas* 5 revolute.

This beautiful plant is the true *P. ignescens* in a perfect state, which bears seven fertile anthers, and produces perfect seeds. The variety β . which is now common in our collections, never produces perfect anthers, and the flowers are very small in comparison to the present, which is a more robust growing plant, and better deserving a place in any collection; it is a very abundant flowerer, continuing in bloom a great part of the year: a mixture of sandy loam and decayed leaves or light vegetable mould suits it best, and being of rather a succulent nature it requires but little water; nothing will injure it more than overwatering it. Cuttings root as free as any other kind, the younger the better, planted in the same kind of soil; very little water must be given them, or they will be apt to rot. *P. ignescens* was first raised from seed by Sir R. Hoare, but whether it be of hybrid origin or a real species, we are not certain. Mr. Loddiges mentions it as a native of the Cape of Good Hope; by others we have been informed it was raised from the seed of *P. fulgidum*, impregnated with some other species.

Our drawing of this beautiful plant was taken at the nursery of Mr. Colvill, the only place where we have seen it in a perfect state.





E. A. Smith del.

Pub. by J. K. Rogers 190 Broadway Jan 1 1890.

J. Walter sc.

GERANIUM palustre.

Marsh Crane's-bill.

G. palustre, pedunculis bifloris longissimis, pedicellis declinatis, foliis radicalibus septemlobis, caulinis quinquelobis dentatis, caule decumbente adscendente, petalis integris.

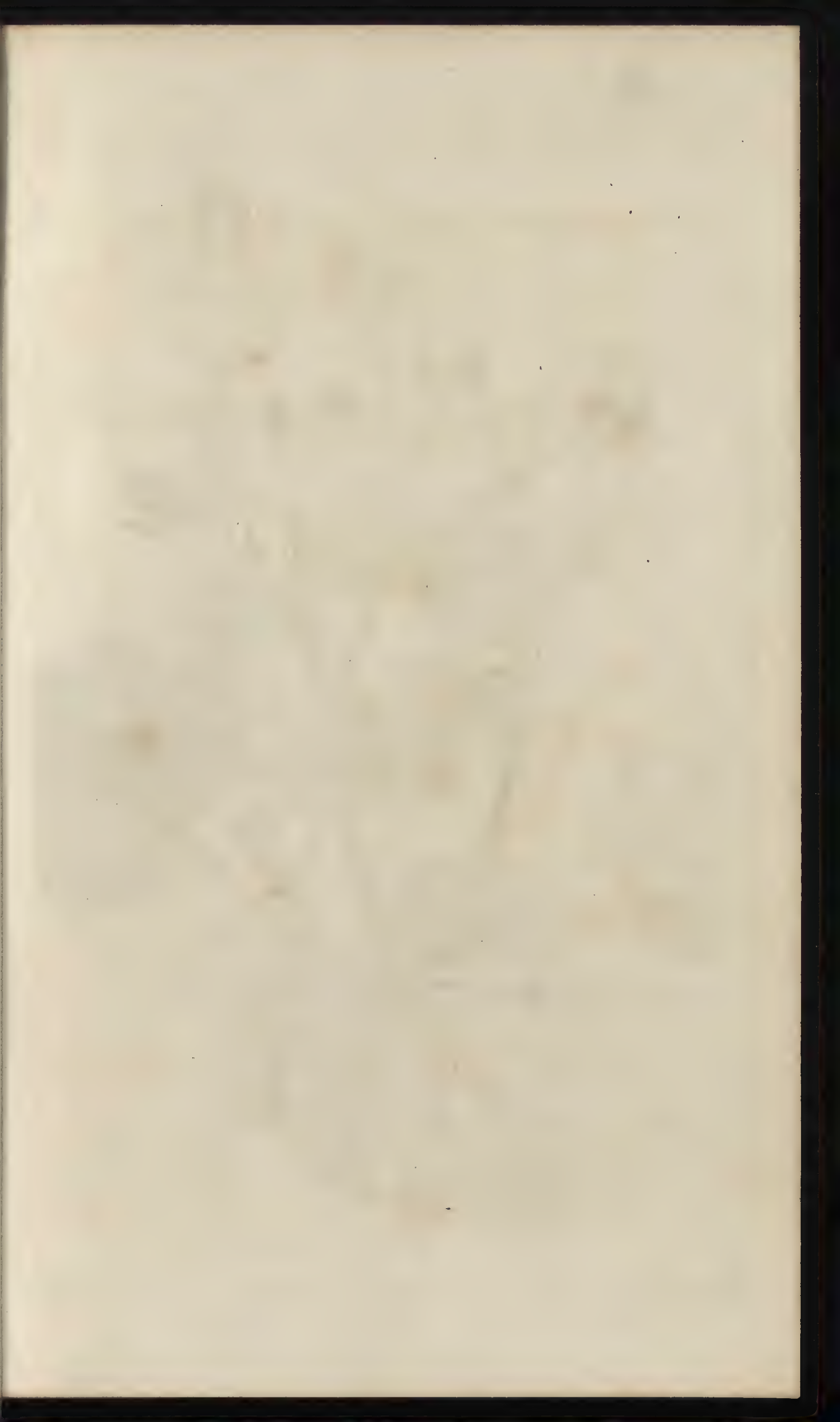
Geranium palustre. *Willd. sp. pl.* 3. p. 703. *Flor. dan. t.* 596. *Cav. diss.* 4. p. 211. *t.* 87. *f.* 2. *Pers. syn. vol.* 2. p. 235. *Hort. Kew. ed.* 2. vol. 4. p. 187.

Root perennial. *Stem* herbaceous decumbent, branching in all directions. *Branches* ascending, at last nearly erect, thickly covered with stiff recurved hairs. *Leaves* near the root deeply divided into 7 lobes, lobes cuneate, dentate; *stalk-leaves* opposite, deeply 5-lobed, unequally dentate, hairy underneath. *Petioles* very hairy. *Stipules* lanceolate, taper-pointed, widened at the base. *Peduncles* very long, 2-flowered; *pedicles* bending downwards, then ascending. *Involucre* generally of 4 bractes, which are membranous, lanceolate, acuminate. *Calyx* 5-leaved, 2 larger than the others, strongly ribbed, with a membranous margin. *Corolla* of 5 entire petals, of equal size, ovate, obtuse, of a reddish purple with darker veins. *Stamens* 10, connected at the base, all bearing perfect anthers. *Germens* pubescent, awns naked, straight. *Stigmas* 5, reflexed, of a pale rose colour.

This is one of the handsomest species of the true Geraniums; it is a native of Germany, and is at present a scarce plant in our collections, though deserving a place in any collection of hardy plants; it is a hardy herbaceous perennial, and will thrive in most soils, but

prefers a moist situation to any other, where it will grow and flower nearly all the summer; if kept in pots they should be set in pans of water, to have them in health; any light loamy soil will suit them: they may be increased by cuttings, but slowly; the best method is to raise them from seeds, which are produced in considerable quantities.

Our drawing was taken at the nursery of Mr. Pamplin, King's Road, Chelsea.





PELARGONIUM blandum.

Blush-flowered Stork's-bill.

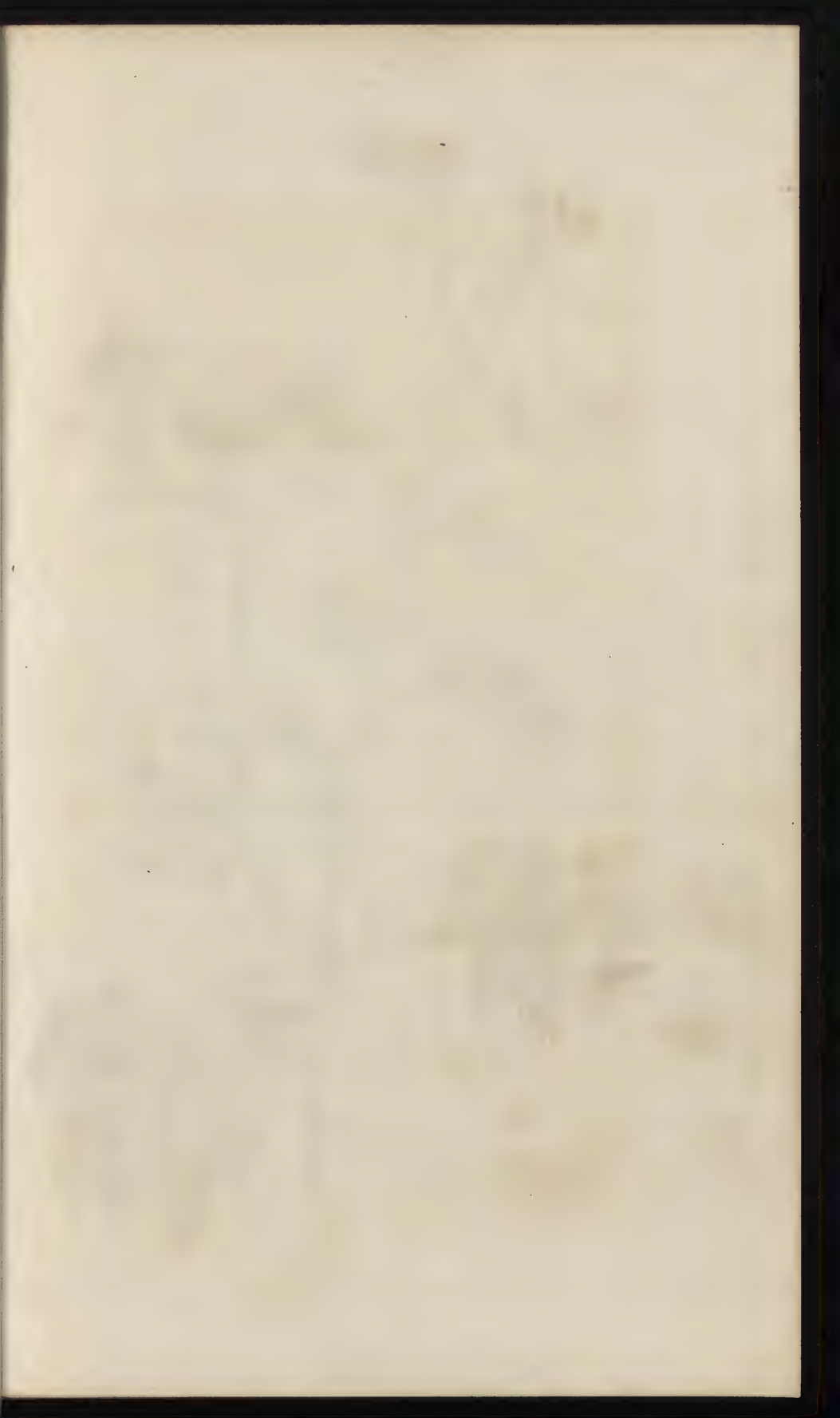
P. blandum, pedunculis plurifloris, foliis cordatis leviter quinquelobis dentatis pubescentibus, floralibus ovatis, tubo nectarifero calyce parùm longiori.

Stem shrubby, erect, branching, thickly covered with soft white hairs of unequal length. *Leaves* cordate, 5-lobed on the lower part of the stem, slightly lobed on the upper part, floral ones ovate, not lobed, unequally dentate, rigid, covered on both sides with a fine soft down. *Petiole* longer than the leaf, very hairy. *Stipules* ovate, taper-pointed, subdentate, ciliate, thickly covered with soft hairs. *Peduncles* longer than the leaves, hairy, from 4 to 6-flowered. *Involucre* of 6 bractes, ovate, acute. *Calyx* 5-cleft, segments unequal, erect, lanceolate, acuminate, densely covered with soft hairs. *Nectariferous tube* a little longer than the calyx, hairy, and flattened on both sides. *Corolla* of 5 petals, the two uppermost widely obversely ovate, of a light blush colour, with a dark red 2-lobed spot in the centre, from which branch various lines of the same colour, 3 lower petals broadly spatulate, obtuse, of a whitish blush. *Filaments* 10, united at the base, 7 only bearing anthers. *Anthers* incumbent, 2-celled, bursting at the front to discharge the pollen, which is granular and orange-coloured. *Germen* villous. *Style* red, very hairy. *Stigmas* 5, purple and revolute.

We suspect this beautiful plant to be of hybrid origin, perhaps it has been produced between *P. acerifolium* and *P. speciosum*; it comes nearer to the former than to any other species with which we are acquainted, but differs materially in its mode of inflo-

rescence, and its leaves not being so deeply lobed; in some nurseries it is known by the name of the *Waterloo Geranium*, in others by the appellation of *Diana*; it is a very handsome growing plant and abundant flowerer, producing a succession of bloom from April to September; it is also very hardy, requiring only a common greenhouse or light room, to protect it from frost, and being of a woody texture, it is not so liable to be injured by wet as some others; it may be grown in any rich vegetable mould, or a mixture of good loam and decayed leaves will suit it very well. Cuttings root freely planted in the same kind of soil, and placed in a sheltered situation.

Our drawing was taken from a plant in the collection at Mr. Dennis's nursery, Chelsea, in May last.





J. D. Smith del.

Pub. by J. R. B. & Co. London, 1840.

J. D. Smith sc.

PELARGONIUM melissinum.

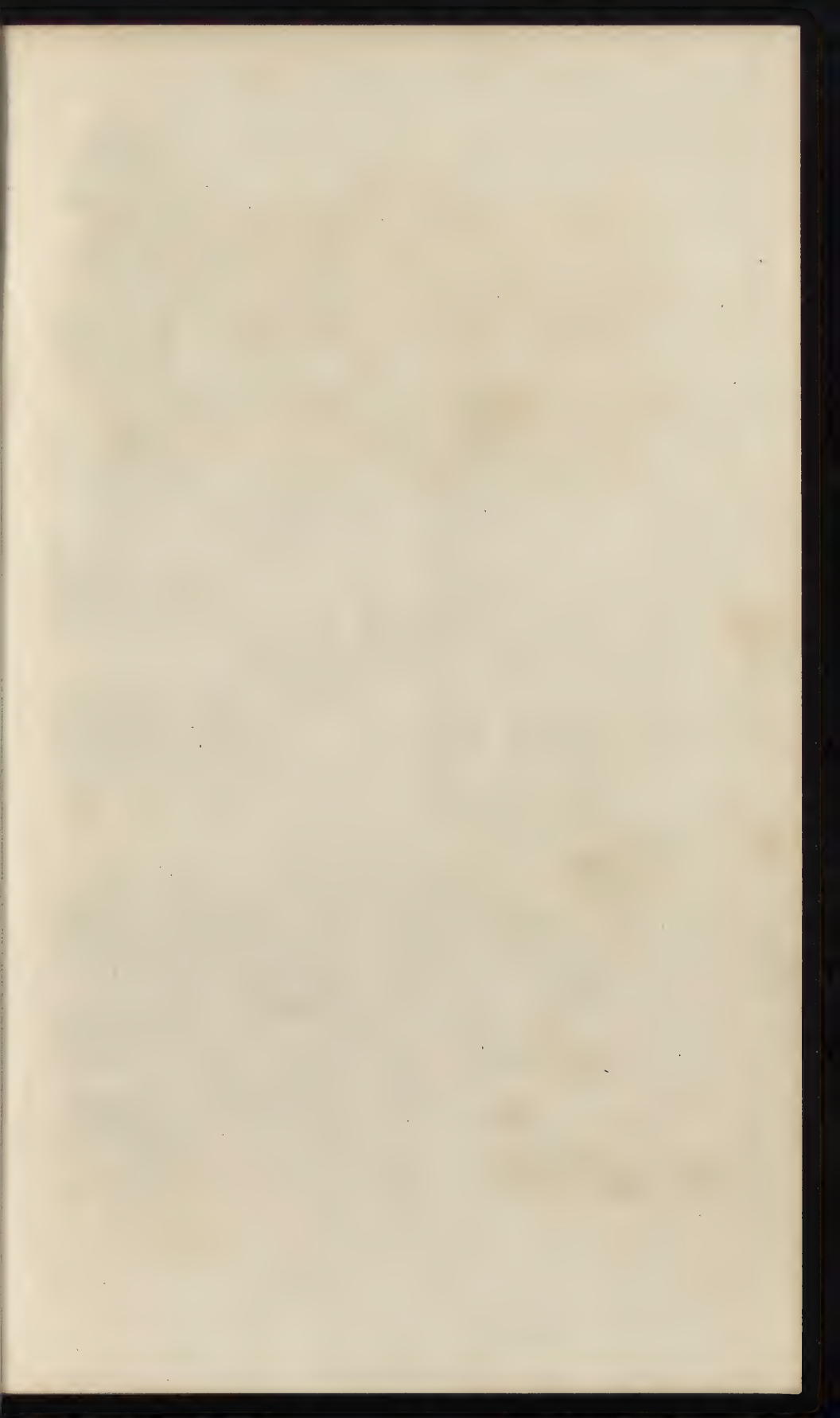
Balm-scented Stork's-bill.

P. melissinum, umbellis paucifloris, foliis cordatis quinquelobis undulato-plicatis dentatis: lobis inferioribus dilatatis lobatis: superioribus trilobis, stipulis dentatis ciliatis.

Stem shrubby, branching. *Branches* erect, very downy. *Leaves* deeply 5-lobed, strongly ribbed on the lower, and furrowed on the upper side, covered on both sides with soft downy hairs, margins undulate and plaited; lower lobes widely spreading, unequally lobed and toothed; intermediate ones slightly lobed: upper one three-lobed. *Petiole* longer than the leaf, downy, a little flattened and channelled on the upper side. *Stipules* cordate, taper-pointed, ciliate, and generally toothed. *Peduncles* 2 to 5-flowered, downy, and reaching beyond the leaves. *Pedicels* unequal in length, about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, spreading. *Nectariferous tube* longer than the calyx, flattened on both sides, downy. *Petals* 5, the two uppermost obversely ovate, white, stained nearly all over with red; in the middle of it is a large dark spot, nearly black, from which branch some short stripes of the same colour: lower petals narrowly lanceolate, white. *Filaments* 10, seven only bearing anthers. *Pollen* orange-coloured. *Style* hairy. *Stigmas* 5, reflexed.

Our drawing of this pretty little plant was taken at Mr. Davey's nursery, King's Road, Chelsea. It is one of the hybrid kinds, that hath been produced between *P. crispum* or some of its kin, and perhaps *P. graveolens*, and is not very unlike *P. crispum latifolium* of

L'Heritier. It is a desirable plant, as it takes up but little room, and is a free grower and an abundant flowerer; its leaves when rubbed have the exact fragrance of *Melissa officinalis* or common Balm, more so than any other kind that we have met with. It requires the protection of a greenhouse, or warm light room, to preserve it through the winter, but must be allowed plenty of air in mild weather. A mixture of loam and decayed leaves, or peat, is a proper soil for it, or any light rich earth, giving it but little water in winter. Young cuttings will root freely, planted in pots and placed in a sheltered situation.





ERODIUM caucalifolium.

Bur-parsley leaved Heron's-bill.

E. caucalifolium, acaule, pedunculis multifloris, foliis pinnatis: pinnis subpetiolatis pinnatifidis incisodentatis, petiolo communi nudo hirto, petalis ovatis obtusis basi dense ciliatis calyce duplo longioribus.

Perennial. Stalkless. Leaves numerous, pinnate: *pinnæ* alternate, pinnatifid or deeply dentated, hairy on both sides; *segments* lanceolate, acute, entire or rarely toothed, nerves prominent. *Petiole* flattened on both sides, slightly channelled above, hairy. *Peduncles* very long, hairy, and many-flowered. *Flowers* in a two-ranked umbel: *pedicles* widely spreading, a little swollen at the base. *Calyx* of 5 sepals: *sepals* concave, with a membranous margin, awned, very hairy. *Corolla* of 5 petals, twice as long as the calyx, ovate, obtuse, the two uppermost widest, of a bright rose colour, slightly marked with a darker colour at the base, something like *Pelargonium*: 3 lower petals rather smaller, rose-coloured, all densely ciliate at the base. *Filaments* 10, united at the base, 5 only bearing anthers. *Germen* villous. *Arillus* pubescent. *Involucre* of one bracte, divided into many revolute segments.

We are indebted to Mr. W. Anderson, Curator of the Botanic Garden, Chelsea, for the opportunity of giving a figure of this beautiful, and, as far as we can trace, undescribed species of *Erodium*, which he raised from seed received from France under the name of *E. alpinum*; from which it abundantly differs, that being a branching plant, and its petioles toothed between the pinnæ, this being without branches and the pe-

tioles naked. It is an abundant flowerer, continuing to flower in succession the greater part of the year, if grown in a pot, and protected from the frost in winter. It appears to be perfectly hardy, and of easy culture, and would most likely thrive better in a light border in the open ground, than it does in a pot: if kept in a pot it should be planted in a mixture of loam and decayed leaves, or any light mould: it has not yet produced perfect seeds, but might probably be increased by cuttings of the roots, planted in a pot of light mould, and placed in a close frame, with very little water, till they begin to grow, when they must be hardened to the air by degrees.





PELARGONIUM Vandesiaë.

Comtesse de Vandes' Stork's-bill.

-
- P. *Vandesiaë*, umbellis plurifloris subcapitatis, foliis palmatifidis: lobis 7-9 oblongis divisis dentatis scabris margine revolutis, tubo nectarifero breviori calyce.
-

Stem shrubby, erect, not much branched; *branches* stiff, of a reddish brown, clothed with a mealy pubescence. *Leaves* palmatifid, or deeply divided: lobes 7-9, oblong, bluntish, divided, unequally toothed, rough to the touch, revolute at the edge, covered on both sides with a short mealy pubescence. *Petioles* a little swollen at the base, slightly channelled on the upper side, thickly covered with unequal hairs. *Stipules* ovate or widely lanceolate, widened at the base, and taper-pointed, sometimes toothed, ciliate. *Peduncles* several-flowered, hairy. *Pedicles* very short, about the length of the nectariferous tube. *Calyx* 5-cleft, segments reflexed. *Nectariferous tube* shorter than the calyx. *Corolla* of 5 petals, two uppermost widest, obovately wedge-shaped, of a rosy blush colour, beautifully marked with red and dark purple: lower ones spatulately wedge-shaped of a lighter blush. *Filaments* 10 united at the base, 7 only bearing anthers. *Germen* villous. *Style* red. *Stigmas* 5, slightly reflexed.

Our drawing of this handsome plant was taken at the Comtesse de Vandes' superb collection at Bayswater: we are informed it has been lately raised from seed by Sir R. Hoare. It seems intermediate between *P. augustum* and *P. blandfordianum*, and is no doubt their hybrid production. It may be considered as

one of the most beautiful sorts, and is therefore desirable for all collections. It is a very hardy kind, and free grower, and requires only protection from frost; any light rich soil will suit it; and nothing is wanting to make it thrive but plenty of light and air in mild weather, and but little water in winter. Cuttings strike root readily, planted in a loamy soil and placed in a sheltered situation.





PELARGONIUM obtusilobum.

Blunt-lobed Stork's-bill.

P. obtusilobum, pedunculis paucifloris, foliis profunde trilobis: lobis rotundato-obtusis inæqualiter acute dentatis, venis subtus calycibusque scabriusculis, stipulis cordatis dentatis.

Pelargonium obtusilobum. Willd. enum. 2. p. 711.
Hort. sub. lond. p. 152. n. 154.

Pelargonium tricuspidatum; rubrum. Hortulanorum.
non verò L'Heritieri.

Stem shrubby, branching, seldom exceeding 18 inches in height; *branches* short, thickly clothed with leaves, slightly downy. *Leaves* deeply 3-lobed: lobes wedge-shaped, obtuse; side ones divaricate, unequally and acutely toothed; middle one slightly 3-lobed, broadly wedge-shaped, acutely toothed: *nerves* covered underneath with little rough tubercles and rigid hairs: *floral leaves* slightly 3-lobed. *Petioles* unequal in length, rather short and thick, slightly pubescent, a little flattened on the upper side. *Stipules* cordate, taper-pointed, generally toothed, slightly ciliate. *Peduncles* 2-5 flowered, slightly pubescent. *Involucre* of 3-6 bractes, ovate or broadly lanceolate, acute, ciliate. *Pedicles* very short. *Calyx* of 5 unequal segments, covered with little rough tubercles; back segment erect, ovate, acute: the others broadly lanceolate, reflexed. *Nectariferous tube* much flattened, channelled on both sides, slightly curved, about twice the length of the calyx. *Petals* 5, the two uppermost roundly obcordate of a dark rose colour, in the middle of each are two dark confluent spots, and underneath two

forked lines which are slightly branched: lower petals roundly obovate of a lighter rose colour. *Filaments* 10 united at the base, 7 only bearing anthers. *Pollen* orange-coloured. *Germen* sericeous. *Arillus* pubescent. *Style* dark red, slightly hairy. *Stigmas* 5, purple and revolute.

According to Willdenow this pretty plant is a hybrid production; but if so, we cannot guess from what species it has originated: we supposed it to be an original species, having seen it common in the collections about London these 12 or 13 years, where it has always been mistaken for *P. tricuspidatum*, which no doubt originated from the roughness underneath the nerves of the leaves, which is still more apparent in the real *P. tricuspidatum*, a species we do not recollect having seen about London, but have seen it in the Marquis of Bath's collection at Longleat, and at Sweet's and Miller's nursery, Bristol.

This is a desirable plant for any small collection, being of low growth and an abundant flowerer; it is also very hardy, requiring to be only protected from frost, and not to be overwatered in winter: it will thrive in any rich light soil, or a mixture of loam and leaf mould will suit it as well as any. Cuttings will root readily in the same kind of soil placed in a shady situation. Our drawing was taken at Mr. Colvill's nursery, King's Road, Chelsea, in October last.





PELARGONIUM pannifolium.

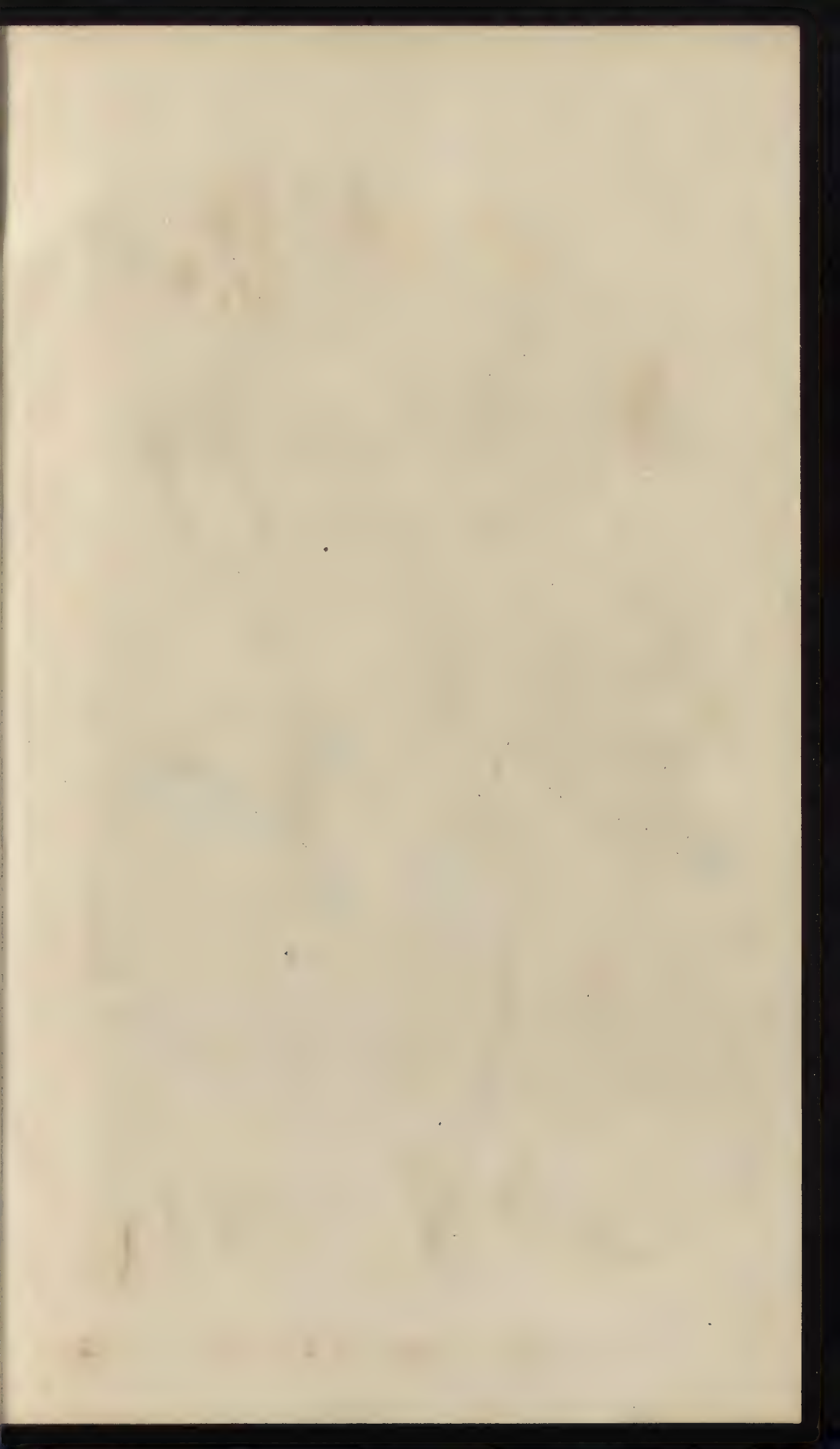
Cloth-leaved Stork's-bill.

P. pannifolium, umbellis plurifloris, foliis cordatis sublobatis inæqualiter dentatis villosis, tubo nectarifero calyce breviori.

Stem shrubby, upright; *branches* covered with soft villous hairs, as is every other part of the plant, except the corolla. *Leaves* cordate, slightly lobed, undulate, unequally toothed, acute, feeling like cloth, very soft to the touch; *upper leaves* wedge-shaped. *Stipules* cordate, acuminate, subdentate, soon withering and falling off. *Peduncles* 4-6 flowered. *Involute* of six widely lanceolate bractes. *Pedicles* unequal in length, when in flower shorter than the nectariferous tube, but longer when in seed. *Calyx* 5-cleft, segments unequal, lanceolate, acute, thickly covered with soft villous hairs. *Nectariferous tube* shorter than the calyx, flattened on each side, and slightly channelled. *Corolla* of 5 petals, two uppermost oblong ovate, of a blush colour, with two dark red stripes coming from the base, from which branch numerous lines in each direction, palest at the upper part, above the middle is a beautiful dark purple spot, from which also branch lighter lines; three lower petals oblong-spatulate, obtuse, of a pale lilac colour. *Filaments* 10 united at the base, seven only bearing anthers. *Pollen* yellow. *Style* red, hairy. *Stigmas* 5, purple, spreading. *Seeds* sericeous. *Arillus* covered with soft villous hairs.

This beautiful plant is of hybrid origin, and seems to be intermediate between *P. blandum* No. 4, and *P. magnificum* of Gardeners; it was raised from seed by Mr. Dennis, at whose nursery our drawing was taken

in September last. It is a desirable plant for any collection, being easily managed, and an abundant flowerer, and continues in bloom till late in autumn. It will thrive well in any rich light soil, or a mixture of loam and decayed leaves suits it very well. Cuttings will root freely, and any common greenhouse, or light room, is sufficient to keep it through winter, watering it sparingly, and giving it plenty of air in mild weather.





PELARGONIUM Mostynæ.

Mrs. Mostyn's Stork's-bill.

P. *Mostynæ*, pedunculis paniculatis: umbellis multifloris, foliis reniformibus undulato-lobatis dentatis, pedunculis calycibusque villosissimis.

Geranium Mostynum. Colvill MSS.

Stem shrubby, upright, with few branches. *Leaves* pubescent on both sides, reniform, waved, slightly lobed, dentate, ciliate. *Stipules* ovate, toothed, acuminate, upper ones wedge-shaped. *Peduncles* longer than the leaf, covered with long villous hairs, most numerous at the upper part. *Umbels* 5 to 8-flowered. *Involucre* of 6 bractes; *bractes* cuneate, subdentate, villous. *Calyx* divided into 5 segments, thickly covered with soft villous hairs; segments lanceolate, acute, the upper one largest. *Nectariferous tube* 3 times shorter than the pedicle. *Corolla* of 5 petals, the two uppermost obovate, pale purple, beautifully marked with dark lines: the three lower ones lanceolate, obtuse, of a pale rose colour. *Filaments* 10, united at the base, seven only bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* hairy, purple. *Stigmas* 5, spreading.

Our drawing of this plant was taken at the nursery of Mr. Colvill, King's Road, Chelsea, who named it in honour of Mrs. Mostyn, an admirer of curious plants; we suspect it to be of hybrid origin, but cannot determine between which species; it hath some distant affinity to *P. cordatum*; also to *P. cucullatum*, and other species nearly allied, but is readily distinguished from them all. It is a very hardy kind, and early flowerer,

which makes it a desirable plant. It will thrive well in an equal mixture of good loam and decayed leaves, or any rich vegetable mould, and requires the protection of a greenhouse or warm room in winter, when care must be taken not to overwater it; and plenty of air should be always admitted in mild weather, which makes it strong and healthy. Cuttings strike root readily, planted in the same kind of soil, and placed in a shady situation; several may be planted in one pot; and when rooted they should be transplanted singly in small pots.





J. Smith del.

Col. by J. Ridgway 170 Piccadilly March 1 1820

J. Watts sc.

PELARGONIUM pustulosum.

Blistered-leaved Stork's-bill.

P. pustulosum, pedunculis subbifloris, foliis inferioribus profunde trilobis subtus pustulato-scabris: lobis lateralibus divaricatis inæqualiter acute dentatis: intermedio trilobo acute dentato, caule diffuso.

Stem shrubby, very much branched; *branches* slender, spreading in all directions, rigid, and covered with short stiff hairs. *Leaves* deeply 3-lobed, wedge-shaped at the base, concave, with inflexed undulate margins, roughly blistered underneath and covered with short stiff hairs which have a white pellucid gland at their base; *side-lobes* spreading out, unequally and acutely toothed at the point; *middle lobe* divided into three shorter lobes, unequally toothed: *upper leaves* scarcely lobed, but deeply toothed. *Petioles* unequal in length, covered with stiff pellucid hairs, and channelled on the upper side. *Stipules* short, cordate, ending in an acute point, with ciliated margins. *Peduncles* longer than the leaves, 1-2 flowered, covered with pellucid hairs. *Involucre* of 4 cordate leafy bractes, terminating in an acute point. *Pedicles* shorter than the nectariferous tube, slightly hairy. *Calyx* 5-cleft, segments unequal, back segment erect, the others spreading, a little reflexed, all thickly covered with stiff glandulous hairs. *Nectariferous tube* longer than the calyx, flattened on both sides, slightly hairy. *Corolla* of 5 petals, the two uppermost oblong, obtuse, of a blush colour, with a beautiful bright crimson spot in the centre, below it are two lines of the same colour a little branched at the upper part; the three lower ones linear, obtuse, of a paler blush colour.

Filaments 10 united at the base, seven only bearing anthers. *Pollen* orange-coloured. *Germen* sericeous. *Style* very hairy, flesh-coloured. *Stigmas* 5, red, a little reflexed.

This pretty plant is nearly related to *P. pallidum* and *P. gratum* of *Willdenow's Enumeratio Plantarum Horti Bot. Berolinensis*, but is certainly distinct from both. It is possessed of the Citron-like scent which is common to many of its allies; but whether a real species, or a hybrid production, is not easy to be determined, most probably the latter. It is a pleasing plant, and produces its neat little flowers in abundance till late in autumn after many of the more gaudy kinds have done flowering, which makes it more desirable. It will thrive well in any light soil, or a mixture of loam and leaf mould will suit it very well. Cuttings root readily planted in the same kind of soil and set in a shady situation. It may be kept in any common greenhouse in winter, or a light room, where it will thrive, and continue in flower a considerable time. Our drawing was taken from a plant in the collection of Mr. Colvill, King's Road, Chelsea, in September last.





GERANIUM Nepalense.

Nepal Crane's-bill.

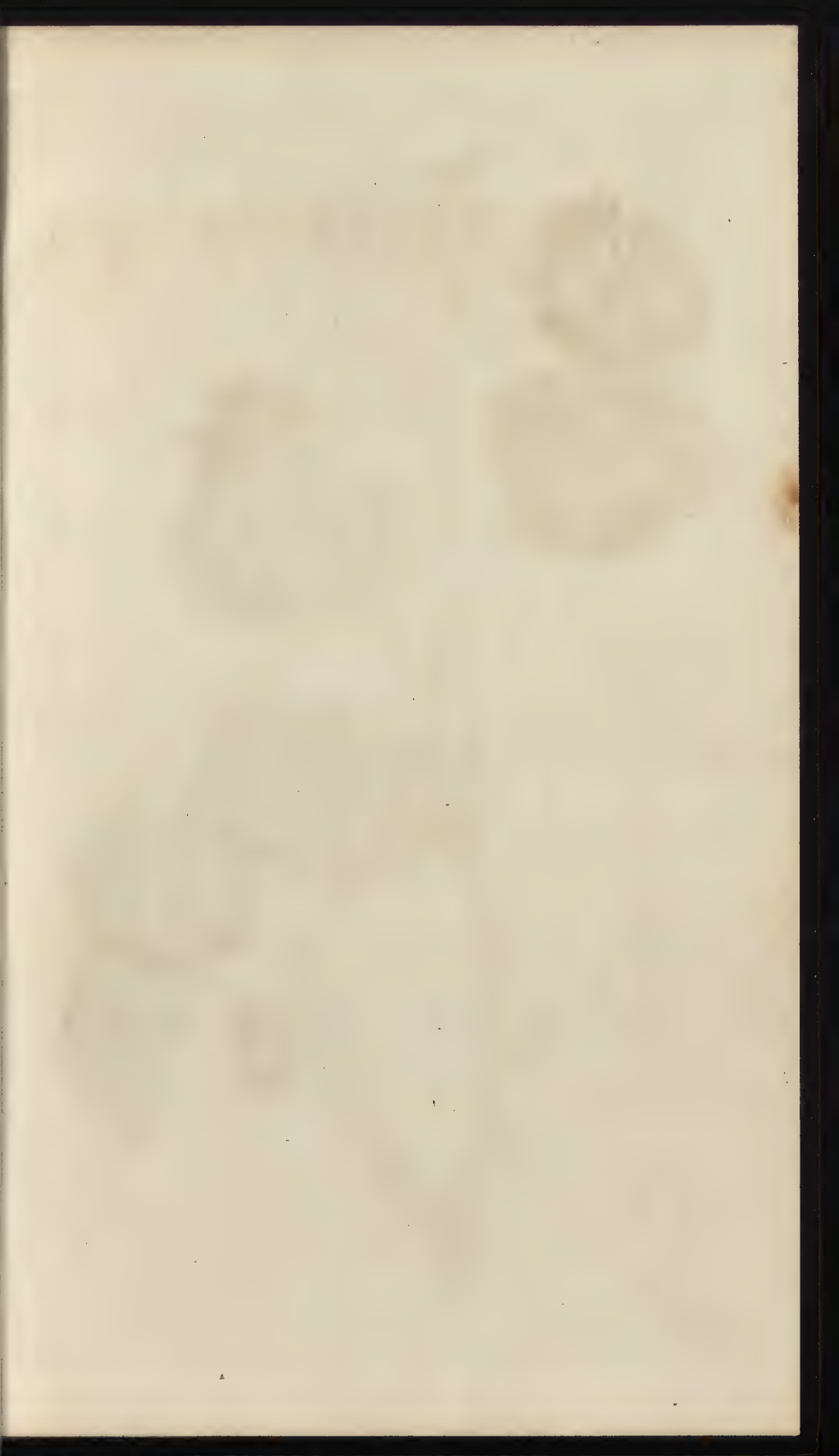
G. *Nepalense*, pedunculis bifloris, caule prostrato, foliis oppositis quinquelobis dentatis, petalis cuneato-obcordatis longitudine calycis aristati.

Geranium Napaulense.

Perennial? Herbaceous. Stems procumbent, spreading in all directions, branching and very hairy. Leaves opposite, cordate, deeply 5-lobed; lobes oblong, unequally toothed, covered on both sides with soft hairs. Petioles unequal in length, nearly cylindrical, very hairy. Stipules subulate, keeled, ciliate and very acute. Peduncles much longer than the leaves, 2-flowered, thickly covered with soft hairs. Involucre of 4 small subulate bractes; pedicles hairy. Calyx of 5 sepals; sepals widely lanceolate, concave, with a membranous margin, ciliate, awned, and 3-nerved. Corolla of 5 equal petals, about the length of the calyx, nearly obcordate, of a bright rose-colour, 3-5-nerved; nerves of a darker colour. Filaments 10, united at the base, all bearing perfect anthers, that are incumbent, 2-celled, and burst in front to discharge the pollen, which is of a whitish colour. Germen hairy. Stigmas 5, sessile, hairy, and slightly recurved.

Several plants of this little species of Geranium were raised last spring by Mr. W. Anderson, at the Botanic Garden, Chelsea, from seeds given him by Sir A. Hume, who received them from Nepal, from one of which our drawing was taken last summer. We believe it to be the first species of the family from that country that has yet been raised in our gardens;

it resembles some of the European species very much, and will probably be quite hardy, but it will be safest to protect them under a frame, or in a greenhouse, until some of them have been kept through the winter in the open air. By its appearance we suppose it to be perennial, being in habit very like *G. pyrenaicum*. It thrives well in any rich light soil, and cuttings strike root freely, planted in pots and placed in a sheltered situation.





Walters, 1870

Pubby, Botany, p. 100, 1870.

S. Walters, 1870.

PELARGONIUM monstrum.

Cluster-leaved Stork's-bill.

P. monstrum, pedunculis capitatis multifloris, foliis orbiculato-reniformibus obsolete lobatis subzonatis complicatis crispis.

Pelargonium monstrum. Willd. *sp. pl.* 3. p. 668. Hort. Kew. ed. 2. v. 4. p. 172. Pers. *syn.* vol. 2. p. 231. L'Herit. *ger.* n. 63.

Stem shrubby, thick, and irregularly swollen, rather succulent, and producing many short thick slightly pubescent branches, crowded with leaves. *Leaves* of a round kidney shape, dark green and obscurely marked with a dark circle, slightly lobed; lobes dentate and curled at the margins, strongly nerved; nerves thinly covered with hairs. *Petioles* longer than the leaf, thick, channelled on the upper side, thickly covered with short rough hairs. *Stipules* cordate, subdentate with an acute point, soon withering and falling off. *Peduncles* hid amongst the leaves or rarely coming above them, very stiff, swollen at the base, a little flattened on the upper side, and covered with very short rigid hairs. *Flowers* in a close head, from 5 to 15 or more. *Involucre* of 6 or more bractes, ovate ending in an acute point, soon withering and falling off. *Calyx* 5-cleft, segments unequal, lanceolate, covered with stiff hairs. *Nectariferous tube* sessile, variable in length and swollen at the base. *Corolla* of 5 spatulate petals, the 2 uppermost narrowest and shortest, all of a bright rose colour marked with darker veins. *Filaments* 10 united at the base, short, erect, 7 only bearing anthers, the 2 back ones much

shorter than the others. *Anthers* incumbent, ligulate, 2-celled, bursting in front to discharge the pollen, which is of a light orange colour. *Germen* densely sericeous. *Style* smooth, purple. *Stigmas* 5, slightly reflexed.

Our drawing of this plant was taken at Mr. Colvill's nursery in September last; it belongs to a natural section, which will most likely be hereafter divided from *Pelargonium* into a distinct genus, particularly as that genus is now so numerous that good names are with difficulty found for the different species. This section differs from the others in having the 2 upper petals smaller and narrower than the lower ones, and the stamens short and erect, the 2 back ones very short, nearly sessile; the petals are all of one colour, not marked with various colours, as in the other sections, besides a distinct habit, by which they are readily known. To it belongs *P. acetosum*, *stenopetalum*, *pumilum*, *scandens*, *hybridum*, *lateritium*? *zonale*, *Fothergillii*, *crenatum*, *inquinans*, *heterogamum*? The present species and several others not yet distinguished.

This curious plant is seldom seen in flower, and the flowers are often so hid amongst the leaves that they are easily overlooked: it has flowered more abundantly at Mr. Colvill's this autumn than ever we have observed it do before. We believe no figure of it has been published before the present, though it has been in the gardens, according to Hortus Kewensis, ever since 1784, when it was cultivated by Mrs. Norman. It is a hardy plant, and thrives well in loamy soil mixed with decayed leaves, and being of a succulent nature it requires but little water in winter. Cuttings root readily planted in pots or under hand-glasses in a sheltered situation.





PELARGONIUM cortusæfolium.

Cortusa-leaved Stork's-bill.

P. cortusæfolium, umbellis multifloris, petalis obcordatis, foliis cordatis inciso-lobatis undulatis obtuse dentatis, stipulis subulatis, caule carnoso.

Pelargonium cortusæfolium. Willd. *sp. pl.* 3. p. 672.
Pers. syn. 2. p. 231. *Hort. Kew. ed.* 2. p. 175.
L'Her. ger. t. 25.

Geranium cortusæfolium. *Andrews's reposit.* 121.

Stem shrubby, succulent, very rough, with persistent stipules; *branches* short, succulent, crowned with leaves at the top. *Leaves* cordate, lobed, and undulate, covered with a white silky down, lobes unequally toothed. *Petiole* longer than the leaf, swollen at the base, thickened at the upper part, downy. *Stipules* subulate, the upper part withering and falling off, the lower part persistent. *Peduncles* reaching beyond the leaves, bearing umbels of many flowers. *Involucre* of from 7 to 9 ovate bractes, covered with soft villous down. *Pedicles* unequal in length, villous. *Calyx* 5-cleft, segments ovate, reflexed. *Nectariferous tube* about 4 times the length of the calyx, flattened on both sides, thickly covered with soft villous hairs. *Corolla* of 5 obcordate petals, the 2 uppermost largest, white, marked with 6 or 7 small red specks, 3 lower petals of a pinkish blush colour, each marked with 2 faint red spots. *Filaments* 10, united at the base, 6 only bearing anthers in the specimens we have examined, but in L'Heritier's figure there are 7: perhaps it varies from 6 to 7. *Pollen* of a pale yellow colour.

Germen densely villous. *Style* very short, green, and smooth. *Stigmas* 5, bright red, reflexed.

This plant also belongs to a distinct section in *Pelargonium*, and one that will probably constitute a separate genus. Its nearest relatives are *P. crassicaule* of L'Heritier, and *P. crassicaule* of Botanical Magazine, which appear to be distinct species: the former we have not had an opportunity of examining in a perfect state, but in L'Heritier's figure only 5 anthers are shown; the same number is mentioned by Willdenow and Persoon: the flowers are smaller, and want the crimson spot so conspicuous in the other; the bractes of the involucre (according to the figure) are 3 times shorter and of a different shape. Besides other differences, in *P. crassicaule* of Bot. Mag. we have never found less than 7 anthers in the specimens we have examined: it also produces a leafy flowering stem, with large stipules, very different from the other. If decidedly distinct, it may be named *P. primulinum*, the flowers having the exact fragrance of *Primula veris* or *Cowslip*.

These plants being of a succulent nature require but little water when not in a growing state; they are also more tender than many of the other kinds, being natives of the South-west coast of Africa, from whence they were introduced into this country in 1786, by A. P. Hove, Esq. Sandy loam mixed with peat is the best soil for them, and cuttings will soon strike root when planted in the same kind of soil; but they require to be kept dry at first till the wound is calloused over, or they are apt to rot.

Our drawing was taken at Mr. Colvill's nursery in October last.





PELARGONIUM cardiifolium.

Cockle-shell leaved Stork's-bill.



P. cardiifolium, umbellis multifloris, foliis cuneatis plicatis quinquelobis cartilagineo-dentatis cucullatis, tubo nectarifero calyce duplo breviori.

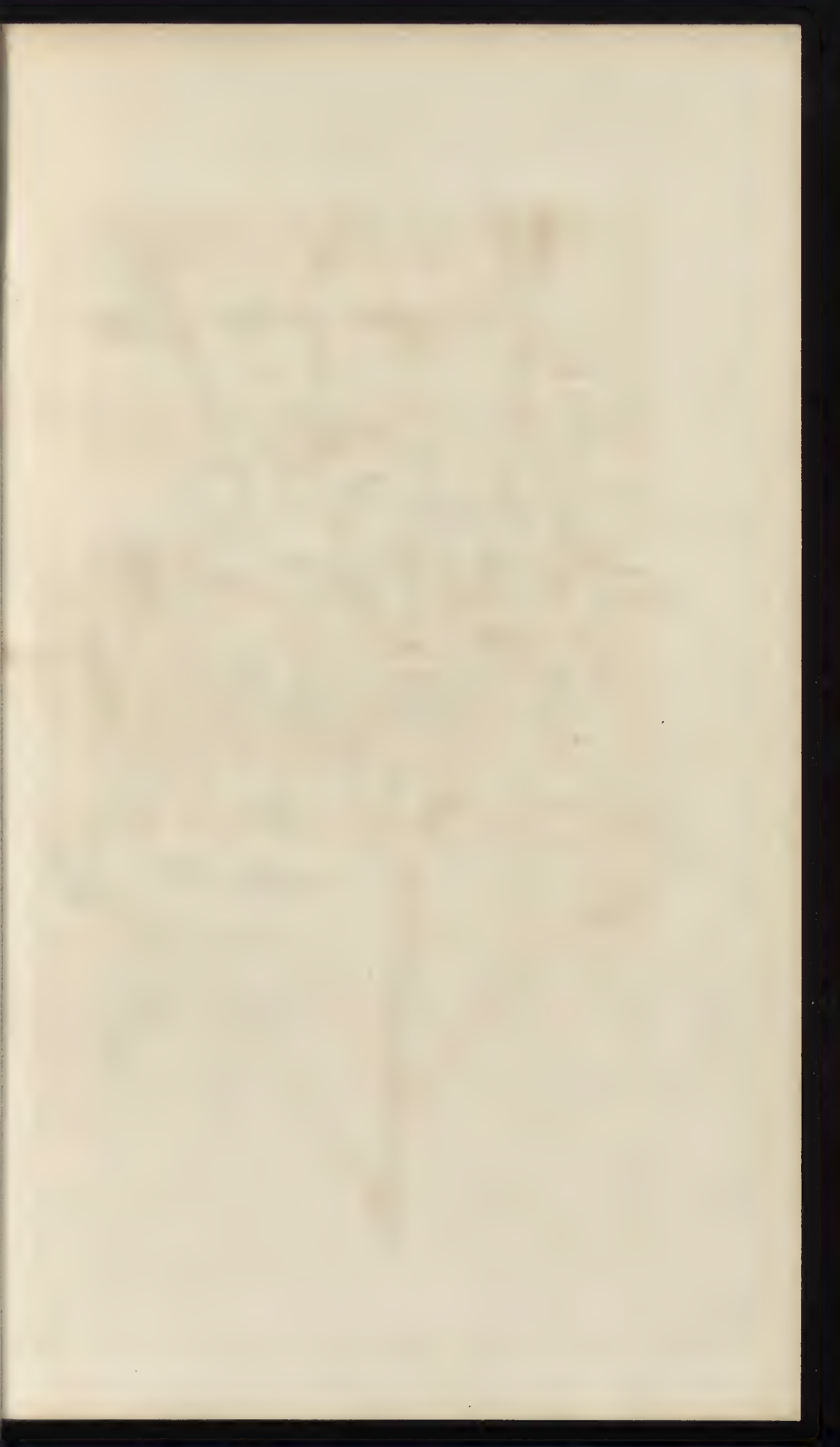
Stem shrubby, growing to a great size, branching; *branches* erect, stiff, thickly covered with soft villous hairs. *Leaves* rigid, wedge-shaped at the base, strongly ribbed, plicate, cucullate, 5-lobed, unequally toothed, with long stiff horny teeth of a purplish colour, which diminish in size towards the base. *Petiole* shorter than the leaf, widely flattened above, and covered with soft villous hairs; as are the leaves, peduncles, calyx, and bractes. *Stipules* lanceolate, acuminate. *Peduncles* many-flowered. *Involucre* of many bractes, unequal in number, and of various sizes; *bractes* lanceolate, sharply acuminate, concave. *Pedicles* about the length of the nectariferous tube, sometimes longer. *Calyx* 5-cleft, segments very long, lanceolate, acuminate, concave, erect. *Nectariferous tube* scarcely half the length of the calyx, flattened on both sides, slightly channelled. *Corolla* of 5 petals, the two uppermost widest, oblong, obtuse, of a dark rose colour, with a dark purple oblong spot in the centre, which joins two dark purple streaks from the base, from which branch various other lines of a lighter colour, and between the streaks are 3 white marks; *three lower petals* oblong, obtuse, of a dark rose colour. *Filaments* 10, 7 only bearing anthers. *Pollen* orange-coloured. *Style* red, hairy below, and smooth above. *Stigmas* 5, reflexed.

This fine plant comes nearest to *P. angulosum*. It is chiefly distinguished by the rigid nerves of its

leaves, and long horny teeth, not unlike the shells of some species of *Cardium* (Cockle). The first time we observed it was at the nursery of Mr. Youl, Kent Road, who raised it from seeds. We are not certain if it be a species or a hybrid production: if the latter, *P. angulosum* must also be one, being intermediate between our present plant and *P. acerifolium*. It belongs to the section of true *Pelargonia*, as do No. 1, 2, 4, 5, 7, 8, 9, 10, 11, and the following plant, which differ from the other sections, by their two upper petals being much the largest, and long declining filaments. There are several other natural sections belonging to the genus.

This is a very hardy plant, and thrives well in rich loamy soil, mixed with decayed leaves or light vegetable mould; a common greenhouse or light room is sufficient to preserve it through the winter, giving it plenty of air in mild weather. Being of a woody texture and a free grower it requires more water than many other kinds. Cuttings root readily under a hand-glass, or in pots placed in a sheltered situation.

Our drawing was taken at the nursery of Messrs. Whitley, Brames, and Milne, Fulham, in September last.





Walt. del.

Tab. 17. S. Knappey 176. Brevitely. June 1. 1726.

Walt.

PELARGONIUM lineatum.

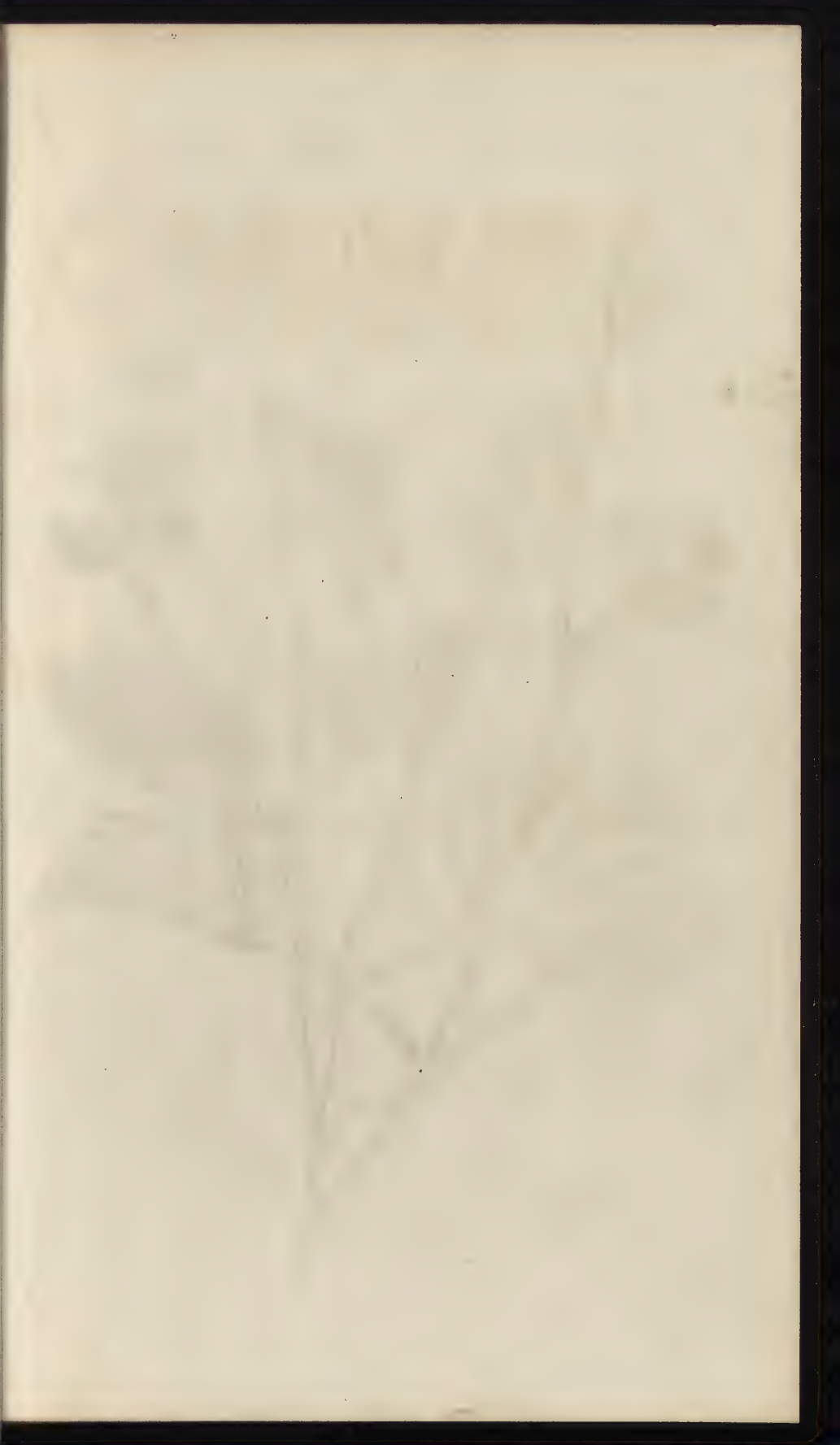
Striped-flowered Stork's-bill.

P. lineatum, pedunculis bifloris, foliis distichis cordato-cuneatis leviter trilobis undulatis dentatis, tubo nectarifero longitudine calycis.

Stem shrubby, much branched, branches short and crowded, slightly pubescent. *Leaves* 2-ranked, small, some cordate, others cuneate, slightly 3-lobed, undulate, dentate, covered with short hairs. *Petioles* unequal in length, slightly channelled on the upper side, covered with short soft hairs. *Stipules* small, cordate, acute, ciliate. *Peduncles* 1-2 flowered, reaching far above the leaves, pubescent. *Involucre* of 2 or 3 bractes, cordately ovate, deciduous. *Pedicels* longer than the nectariferous tube, hairy. *Calyx* 5-cleft, segments unequal, reflexed when the flower is expanded, but erect when in seed. *Nectariferous tube* about the length of the calyx, flattened and channelled on both sides, covered with short hairs. *Corolla* of 5 petals, 2 uppermost roundly-obovate, retuse, of a pale rose colour, with a dark purple forked spot in the centre, and numerous purple and red lines in all directions, 3 lower ones spatulately lanceolate, obtuse, of a paler colour, also marked with red lines. *Filaments* 10 united at the base, 7 only bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* hairy on the lower part, and smooth above, purple. *Stigmas* 5, purple and reflexed.

Our drawing of this little plant was taken at Mr. Colvill's nursery late in the autumn. It is probably one of the mule kinds produced in the nurseries from seed, being nearly related to several. It is a desirable

plant, as it flowers late in the autumn, and if properly managed forms a neat little bush, and takes but little room, as it may be grown in a small pot. It will thrive in a mixture of sandy loam and decayed leaves, or light vegetable mould, and cuttings root freely planted in pots and placed in a sheltered situation.





Saxifraga oppositifolia L. *Saxifraga oppositifolia* L. *Saxifraga oppositifolia* L. *Saxifraga oppositifolia* L.

PELARGONIUM multinerve.

Many-nerved Stork's-bill.

P. *multinerve*, umbellis plurifloris, foliis orbiculato-reniformibus undulato-lobatis inæqualiter dentatis multinerviis, stipulis cordatis obliquis acuminatis; caule villosa; tubo nectarifero longitudine calycis.

Pelargonium splendidum. *Hortulanorum.*

Stem shrubby, upright, not much branched: *branches* thickly covered with soft villous hairs. *Leaves* of a roundish kidney-shape, very much undulated, scarcely lobed, unequally toothed, and covered on both sides with soft downy hairs; upper side deeply furrowed with numerous channels, occasioned by the number of nerves on the under side: *nerves* prominent, 5 main ones proceeding from the base, from which numerous others branch in every direction. *Petioles* thick, slightly channelled on the upper side, and a little compressed on the lower, thickly covered with soft down. *Stipules* cordate, oblique, taper-pointed, very downy. *Peduncles* several flowered. *Involucre* of 4 or 6 unequal ovate concave bractes. *Pedicles* short, about the length of the nectariferous tube. *Calyx* 5-cleft, segments widely lanceolate, very downy. *Nectariferous tube* about the length of the calyx. *Petals* 5, the 2 uppermost roundly ovate, of a fine purple colour with a dark spot in the centre, underneath which they are marked with white, with a few dark marks across, and branching from it: *lower petals* oblong, obtuse, rose-coloured. *Filaments* 10, united at the base, 7 only bearing anthers. *Pollen* orange-coloured. *Style* hairy, purple. *Stigmas* 5, reflexed.

This plant without doubt is of hybrid origin, and in habit approaches *P. cucullatum*. The leaves are also nearer to that than any other with which we are acquainted, but much more undulated, and not so deeply toothed: its flowers are very different in every respect, approaching nearest to *P. solubile* of any we know, but the habit of the plant and foliage differ altogether from that: it is a robust and free growing plant, beginning to flower early in spring, and continuing in full bloom till late in autumn: it is as hardy a kind as any of the genus, and will thrive well in a light loamy soil, or a mixture of loam and decayed leaves will suit it very well. Cuttings root freely planted under a hand-glass, or in pots placed in a sheltered situation. It belongs to the same group as *P. cardiifolium*, &c.

Our drawing was taken at Mr. Davey's nursery in October last.





HOAREA corydaliflora.

Fumitory-flowered Hoarea.

Hoarea. Cal. 5-partitus: laciniis subæqualibus, suprema desinente in tubulum capillarem nectariferum. Cor. 5-petala, irregularis: petala 2 superiora majora. Filam. 10; inferne dilatata et in tubum longum connata, 5-8 sterilia. Arilli 5, monospermi, aristati, ad basin receptaculi rostrati: aristis spiralibus introrsum barbatis. *Herbæ perennes; radice tuberosa, nunc rapiformi; folia integra aut divisa; flores umbellati: umbellæ erectæ.*

H. *corydaliflora*, umbella composita, foliis pinnatis pilosis: foliolis pinnatifidis laciniatisque: laciniis linearibus acutis, petalis superioribus refractis, inferioribus concavis conniventibus.

Pelargonium rapaceum: var. lutea. Bot. mag. 1877.

Root tuberous, in our plant about the length and thickness of the middle finger, equal in size throughout, throwing out at the bottom little tubers, from which the fibres that support it issue. Stem none. Leaves in a little cluster at the crown of the root, very variable, scarcely two alike, pinnate, and covered with soft hairs, some more so than others: *pinnæ* opposite or sometimes alternate, lower ones pinnatifid and deeply divided; upper ones entire, linear, acute. Petiole round, very hairy, with 2 subulate membranaceous stipules attached to the base. Peduncle leafy at the base, and branching in various directions, clothed with short soft hairs, and a few longer ones scattered amongst them. Umbels many-flowered. Involucre of several subulate, acute bractes, thickly covered with soft villous hairs. Calyx 5-cleft, segments linearly-lanceolate, acute, reflexed when the flower is expanded, but erect when closed. Nectariferous tube sessile, flattened on

both sides, and ridged at the back, about twice the length of the calyx. *Corolla* of 5 petals, the 2 back ones reflexed, narrowly spatulate, obtuse, of a pale sulphur colour, with several red linear marks from the bend to the base; lower ones ligulate, connivent, concave, obtuse, of a pale sulphur colour. *Filaments* 10, united at the base, 5 only bearing anthers. *Pollen* yellow. *Germen* and *arillus* covered with soft villous down. *Style* green, hairy at the base, and smooth on the upper part. *Stigmas* 5, red, and revolute.

This very natural division of *Pelargonium*, which differs so much from the others both in habit and character, we have thought requisite to form into a distinct genus. The essential character consists in the filaments being connected into a long tube, and never bearing above 5 perfect anthers; in the segments of the calyx being nearly equal, and the umbels of flowers always erect, not nodding before the flowers expand as in *Pelargonium*; and moreover in its very different habit. This genus will comprise the greater part of the tuberous-rooted species of *PELARGONIUM*. We have named it in honour of Sir R. C. Hoare, whose collection of *Geraniaceæ* exceeds every other in this country, and to whom we are obliged for many useful observations, which will be acknowledged in the course of our publication.

The species of this genus require rather more than common care in their treatment in order to have them thrive well: being at one season of the year in a dormant state, they should be kept dry, till they begin to grow; they may then be shifted into other pots and regularly supplied with water: the best soil for them is loam, peat, and sand, an equal portion of each mixed together. The pots must be well drained with potsherds broken small, that the water may pass through freely: they are increased by the tubers of the roots taken off, and planted in pots, which must be placed on a gentle heat, or by seeds which are sometimes ripened.

Our drawing was taken at the nursery of Mr. Wm. Malcolm, Kensington, in October last: we have no doubt of its being a real species, having seen a great many plants of it imported from the Cape of Good Hope, without the slightest variation in them.





PELARGONIUM dumosum.

Bushy Stork's-bill.

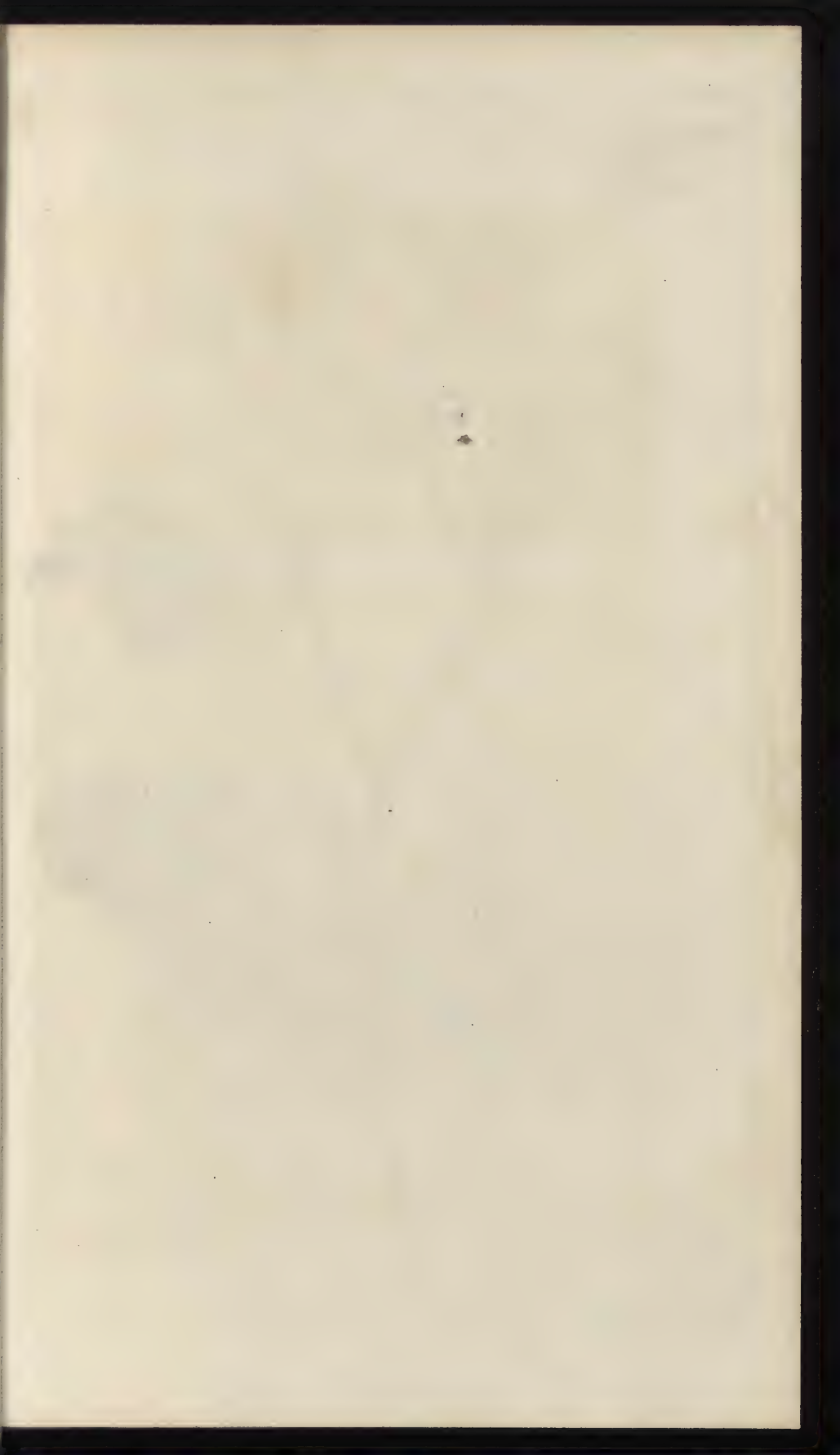
P. dumosum, pedunculis 2-3-floris foliis reniformibus leviter trilobis obtusis dentatis pubescentibus, pedunculis fructiferis geniculatis.

Geranium Angelina. *Hortulanorum.*

Stem shrubby, very much branched; *branches* short and thickly crowded together, covered with soft close villi. *Leaves* small, numerous, reniform and obtuse, some slightly 3-lobed; edge undulate, unequally toothed, ciliate; underneath thickly covered with soft hairs. *Petioles* unequal flattened and channelled on the upper side, villous. *Stipules* short, cordate, acute, fringed. *Peduncles* 2-3-flowered, villous. *Involucre* of 4 unequal bractes, which are cordate, acute, and ciliate. *Pedicles* a little longer than the nectariferous tube, when in fruit bending at the joints, thickly covered with soft villous hairs. *Calyx* 5-cleft, segments all reflexed when in flower, but upright when in seed. *Nectariferous tube* longer than the calyx, flattened and channelled on both sides, villous. *Corolla* of 5 petals, the 2 uppermost broadly obovate, obtuse, rose-coloured, with a very dark spot in the centre, lightest at the sides, from which numerous short lines are seen to branch in various directions; 3 lower petals spatulate, obtuse, of a pale rose colour. *Filaments* 10, united at the base, only seven bearing anthers. *Pollen* yellow. *Style* dark red, hairy at the base, and smooth on the upper part. *Stigmas* 5, dark red, revolute. *Seeds* pubescent. *Arillus* very hairy.

This pretty little plant is known by the appellation of *Angelina* in many of our collections; it comes nearest to *P. pulchellum* of the Supplement to Willdenow's *Enum. plant.* but differs in several particulars; we suspect it to be of hybrid origin, but we cannot guess with what species it may have originated. It makes a compact little bush if properly managed, and produces abundance of its pretty dark flowers till late in autumn, which makes it desirable, especially as it takes up little room, and may be grown in a small pot: it thrives well in any light vegetable mould, or a mixture of loam and decayed leaves suits it very well. Cuttings root freely under a hand-glass, or in pots placed in a shady situation.

Our drawing was taken at Mr. Colvill's nursery in October last.





PELARGONIUM Dennisianum.

Dennis's Stork's-bill.

- P. *Dennisianum*, umbellis plurifloris, foliis cordato-reniformibus acutis concavis undulatis denticulatis; tubo nectarifero calyce sub-duplo breviori.

Stem shrubby, branching; *branches* erect, covered with soft villous hairs, as is every other part of the plant, except the corolla. *Leaves* reniform, or sometimes cordate, slightly 5-lobed, acute, undulate, unequally toothed, with short rigid teeth, densely covered with soft villous hairs, shortest and closest on the upper side. *Petiole* longer than the leaf, channelled on the upper side, and dilated at the base. *Stipules* cordato-lanceolate, acute, sometimes toothed. *Peduncles* 4 to 6 flowered, sometimes more. *Involucre* of 6 bractes united at the base: *bractes* unequal, broadly lanceolate, terminating abruptly in an acute point. *Pedicles* short, unequal in length, bending before the flower expands, but quite erect after. *Calyx* 5-cleft, segments unequal, erect, lanceolate, acute, nearly twice as long as the nectariferous tube, and clothed with long soft hairs. *Nectariferous tube* widely flattened on each side, sometimes channelled. *Corolla* of 5 petals, 2 uppermost widely obovate, obtuse, of a dark red colour, marked with blackish purple streaks, from which branch dark red lines in all directions, 3 lower ones oblong, obtuse, of a lighter colour. *Filaments* 10 united at the base, 7 only bearing anthers. *Pollen* orange-coloured. *Style* purple, very hairy. *Stigmas* 5, purple, and revolute. *Seeds* sericeous. *Arillus* covered with soft villous hairs.

Our drawing of this plant was taken at Mr. Dennis's nursery, who raised it from seed; it is of hybrid origin; being intermediate between *P. cucullatum* and *P. Barringtonii*, or some of their near allies: from the former it differs by the leaves being softer, not so stiff, and the teeth not one third the length, in its peduncles being fewer-flowered, and the flowers of a different colour, from the latter by the leaves of that being smaller, and cornered, its peduncles also producing fewer flowers, which are also different in colour, besides other distinctions. It is a handsome plant, of easy culture, a free flowerer, and continues in bloom till late in autumn, after many of the other kinds have done: it grows freely in a rich light soil, and cuttings strike root readily: any common greenhouse, or light room, is sufficient to preserve it through winter. It should be watered occasionally when dry, and as much air given as possible in mild weather.





Primula

Primula

Primula

S. Wats. ex.

PELARGONIUM carinatum.

Keeled-stipuled Stork's-bill.

P. carinatum pedunculis 2-4 floris, foliis longe petiolatis ovatis inæqualiter dentatis incisive, stipulis carinatis, petalis superioribus oblongis undulatis emarginatis, caule suffruticoso adscendente.

Geranium tricolor, ovalifolium. And. Ger. c. icone.

Geranium ovatum. Cav. diss. 4. p. 238. t. 103. f. 3?

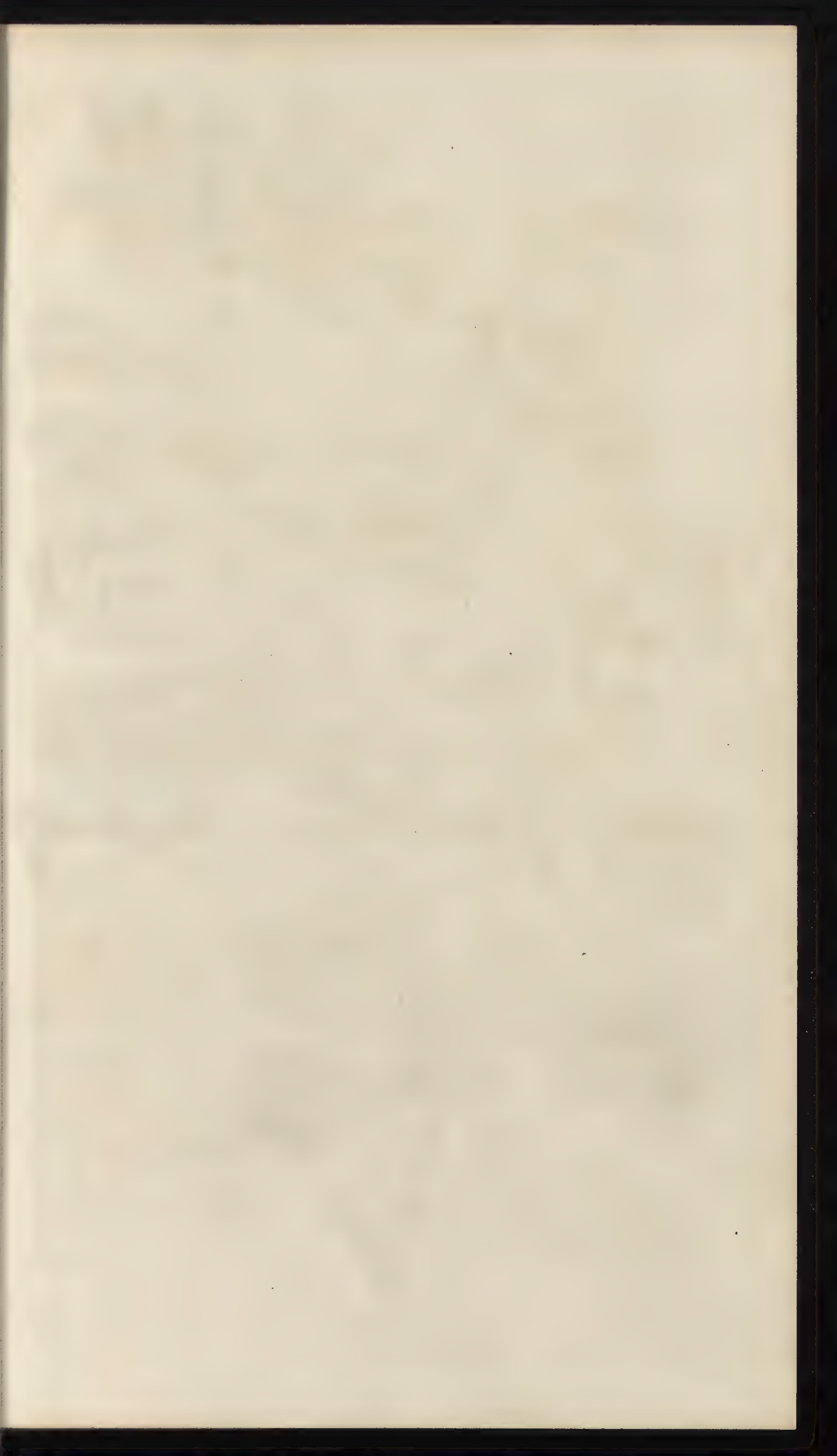
Stem suffruticose, ascending, not strong enough to support its own weight without assistance, a little twisted, very rugged, owing to the persistent bases of the petioles and stipules: in our plant about 2 feet high. *Leaves* oval, sharply and unequally toothed, covered on both sides with a soft mealy pubescence. *Petioles* very long, slightly flattened on the upper side, and rounded below; pubescent and sheathing the stem at the base. *Stipules* lanceolate, keeled, taper-pointed and ciliate. *Peduncles* pubescent, 2-4-flowered. *Involucre* generally of 6 bractes, which are lanceolate, keeled, very acute, and ciliated with soft white hairs. *Pedicles* unequal in length, pubescent. *Calyx* 5-cleft, segments unequal, some ovate, the others lanceolate, keeled, concave, and covered with soft white hairs. *Nectariferous tube* shorter than the calyx. *Petals* 5, emarginate, the 2 uppermost oblong, undulate, of a deep crimson colour, darkest at the base, lower ones narrowly spatulate, undulate, obtuse, white, tinged with pink. *Filaments* 10, united at the base, 5 only bearing anthers, 2 upper sterile filaments with anther-like apices. *Anthers* incumbent, ending in an acute point, in which this tribe differs from all the other

Geraniaceæ that we have examined. *Germen* downy. *Arillus* villous. *Style* purple, hairy at the base and smooth above. *Stigmas* 5, purple and revolute.

Our drawing of this plant was taken at the Comtesse de Vandes' collection at Bayswater: it is said to have been raised from seeds received from Buenos Ayres by the late Mr. Fordyce, but it is without doubt a Cape species, and we are almost certain of its being the same as *Geranium ovatum* of Cavanilles; this section will probably be separated from *Pelargonium*: it is readily distinguished from all the others by its pointed anthers, and the anther-like apices of the upper barren filaments, besides the habit and appearance of the plants which distinguish them at first sight: to it belong *P. trichostemon*, *P. eriostemon*, *P. blattarium*, *P. verbasciflorum*, *P. stipulaceum*? *P. tricolor*, and several others.

Our plant is figured by Mr. Andrews as a variety of *P. tricolor*, from which it differs more than from any other of the section, that being an upright plant with nearly orbicular flat petals, this a procumbent or trailing plant with oblong undulate petals.

The plants of this section are more difficult of cultivation than the true *Pelargonium*. The best soil for them is a mixture of loam, peat, and sand, an equal quantity of each; the pots must be as small as possible, and well drained with potsherds, that they may not get sodden with too much wet, particularly in winter, when they should be kept on a dry airy shelf. Cuttings root freely planted in pots in the same kind of soil, and placed in a sheltered situation.





H.

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PELARGONIUM adulterinum.

Hoary trifid-leaved Stork's-bill.

P. adulterinum, pedunculis 2-4-floris, foliis cordatis trilobis obtusis villosis mollibus, stipulis latis cordatis, tubo nectarifero calyce breviori.

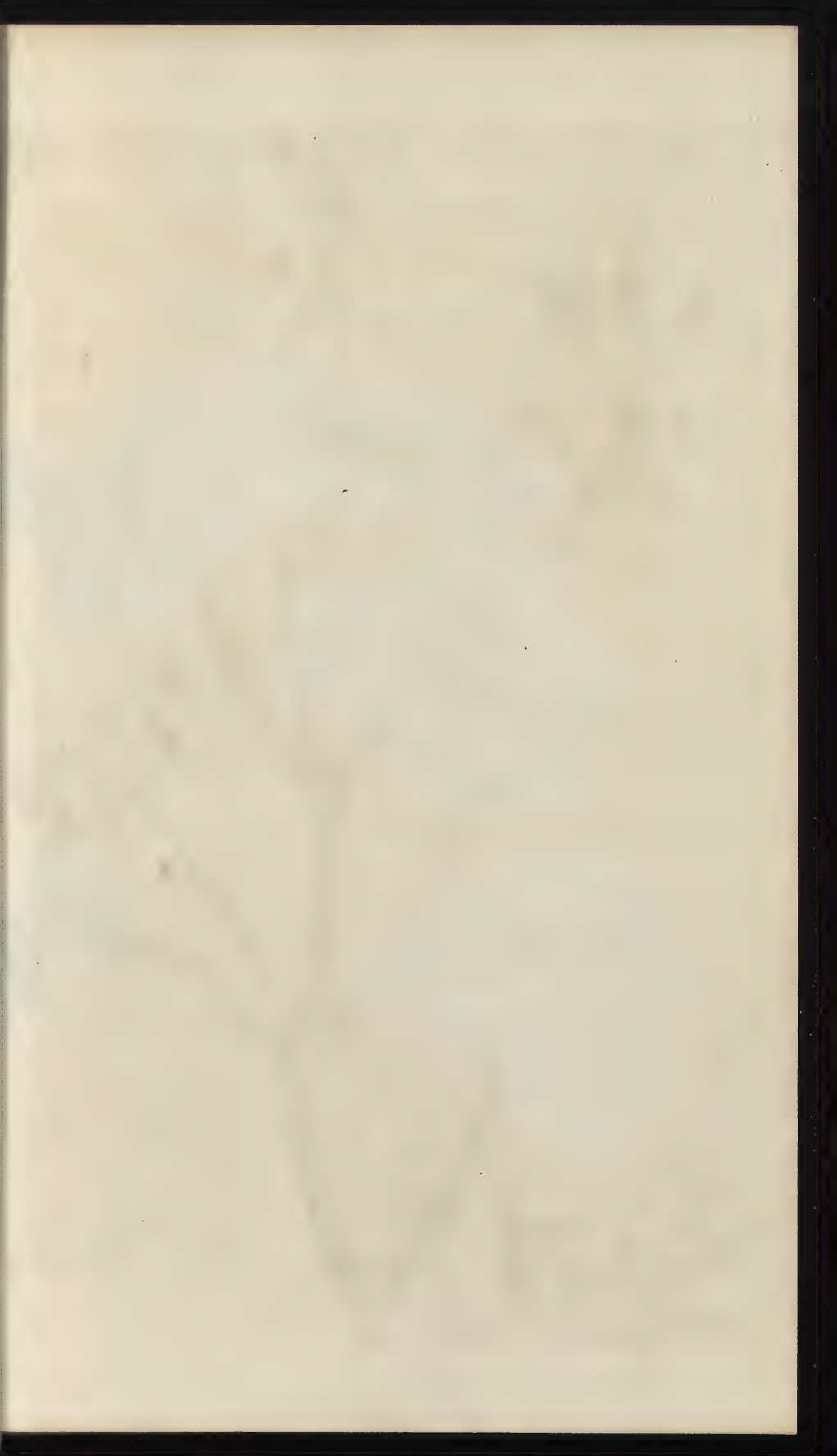
Pelargonium adulterinum. *L'Herit. geran. t. 34.*
Willden. sp. pl. 3. p. 683. Pers. syn. 2. p. 233.
Hort. Kew. ed. 2. v. 4. p. 180.

Kutusoff's Geranium. *Hortulanorum.*

Stem shrubby, of a woody texture, very much branched; *branches* spreading, thickly covered with long soft hairs. *Leaves* cordate, in the winter season slightly 3-lobed, in spring and summer deeply 3-lobed or trifid, densely clothed on both sides with short soft down of a whitish colour; *lobes* very obtuse, unequally toothed with short roundish teeth; *nerves* prominent branching in all directions. *Petioles* about the length of the leaf, flattened and slightly furrowed above, thickly covered with soft white hairs. *Stipules* short, broadly cordate, ending abruptly in an acute point, sometimes toothed, villous. *Peduncles* villous, 2 to 4 flowered. *Involucre* of 4 or 6 bractes; *bractes* ovate, concave, very downy. *Pedicles* short but unequal in length. *Calyx* 5-cleft, segments very unequal, erect, lanceolate, acute, concave, thickly covered with soft villous hairs. *Nectariferous tube* short and thick, about half as long as the calyx. *Petals* 5, the 2 uppermost widely obovate, of a dark red, approaching to purple, marked with dark stripes from the base, which branch in all directions, lower ones oblong, obtuse of a dark rose-colour. *Filaments* 10, united at the base, 7

only bearing anthers, which are often void of pollen. *Germen* and *arillus* villous. *Style* dark red, hairy at the base, and smooth on the upper part. *Stigmas* 5, purple, revolute.

This is one of the earliest flowering species of this genus with which we are acquainted, being generally in full bloom before any of the other kinds begin to open, which makes it a very desirable plant; it is also as hardy as most of the others, and thrives well in a rich light soil. Cuttings strike root freely planted under a hand-glass, or in pots of mould placed in a sheltered situation. Our drawing was taken from a plant at Mr. Dennis's nursery the latter end of March. According to the *Hortus Kewensis* a native of the Cape of Good Hope, from whence it was introduced in 1785 by Mr. Archibald Thompson: we believe no coloured figure of it has ever been published before the present.





ERODIUM hymenodes.

Three-leaved Heron's-bill.

E. *hymenodes*, pedunculis multifloris, foliis obtusis inciso-dentatis: inferioribus ternatis; superioribus trilobis, caule erecto. *Willden. sp. pl.* 3. p. 635. *Botan. magaz.* 1174. *Hort. Kew. ed.* 2. p. 157. *Pers. syn.* 2. p. 225. *L'Herit. heran. t.* 4.

Erodium trilobatum. *Jacq. ic. rar.* 3. t. 508. *Collect.* 4. p. 200.

Geranium hymenodes. *Andrews's reposit.* 413.

Geranium trifolium. *Cav. diss.* 4. p. 223. t. 97. f. 3.

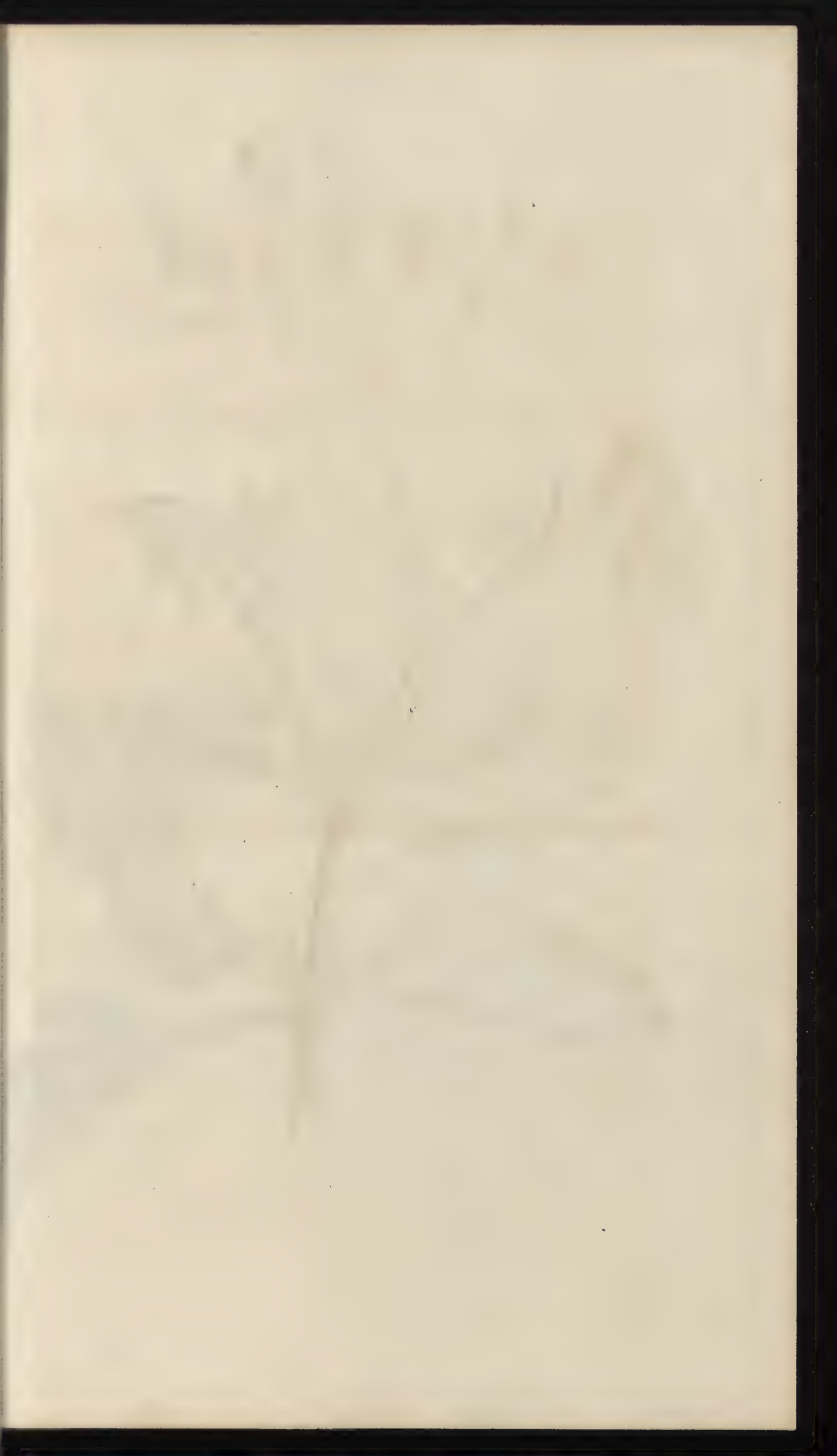
Geranium geifolium. *Desf. atl.* 2. p. 108.

Perennial. *Herbaceous*, increasing yearly in size above ground, and branching off a little. *Stalks* numerous, erect, thickly covered with soft unequal hairs. *Leaves* opposite, lower ones ternate, upper ones deeply 3-lobed; lobes obtuse, unequally toothed, with round blunt teeth. *Petioles* flat on the upper side and rounded below, thickly clothed with soft villous hairs. *Stipules* membranaceous, white, some lanceolate, others oblong or ovate, pubescent. *Peduncles* many-flowered, villous. *Involucre* of 4 or 6 membranaceous bractes united into one at the base, and slightly pubescent. *Pedicels* arranged in 2 rows before the flowers expand, afterwards spreading all round and ascending when in seed. *Calyx* of 5 sepals; *sepals* ovate or broadly lanceolate, obtuse, concave, with a membranaceous margin, densely covered with soft villous hairs. *Corolla* of 5 petals, nearly equal in size, longer than the calyx, nearly orbicular, and ciliated at the base: *upper petals*

rather widest, of a light blush colour with a reddish brown spot at the base, branching out into light red veins: *lower petals* of a pale blush colour with darker veins. *Filaments* 10, slightly connected at the base, 5 only bearing anthers: *antheriferous filaments* succulent and subulate; *sterile ones* flat, lanceolate, and membranaceous. *Anthers* incumbent, obtuse at both ends. *Pollen* orange-coloured. *Seeds* villous. *Arillus* pubescent. *Stigmas* sessile, reflexed, of a pale rose colour.

This pretty species of *Erodium* is a native of Barbary, and was introduced in 1789; it is well deserving a place in the greenhouse, where it will continue in flower nearly all the winter: it is hardy enough to endure our winters with the protection of a common frame in severe weather, but then it produces no flowers till spring: it will thrive and flower well in a light airy room, if not overwatered, and will grow freely in any rich light soil. Cuttings root readily, planted under hand-glasses, or in pots of mould placed in a sheltered situation: it also ripens plenty of seeds.

Our drawing was taken at the nursery of Mr. Davey, King's Road, Chelsea, in April last.





PELARGONIUM solubile.

Dissolvable-coloured Stork's-bill.

P. solubile, umbellis subsexfloris paniculatis, foliis orbiculato-reniformibus subcucullatis rigidis sublobatis dentatis, tubo nectarifero longitudine calycis.

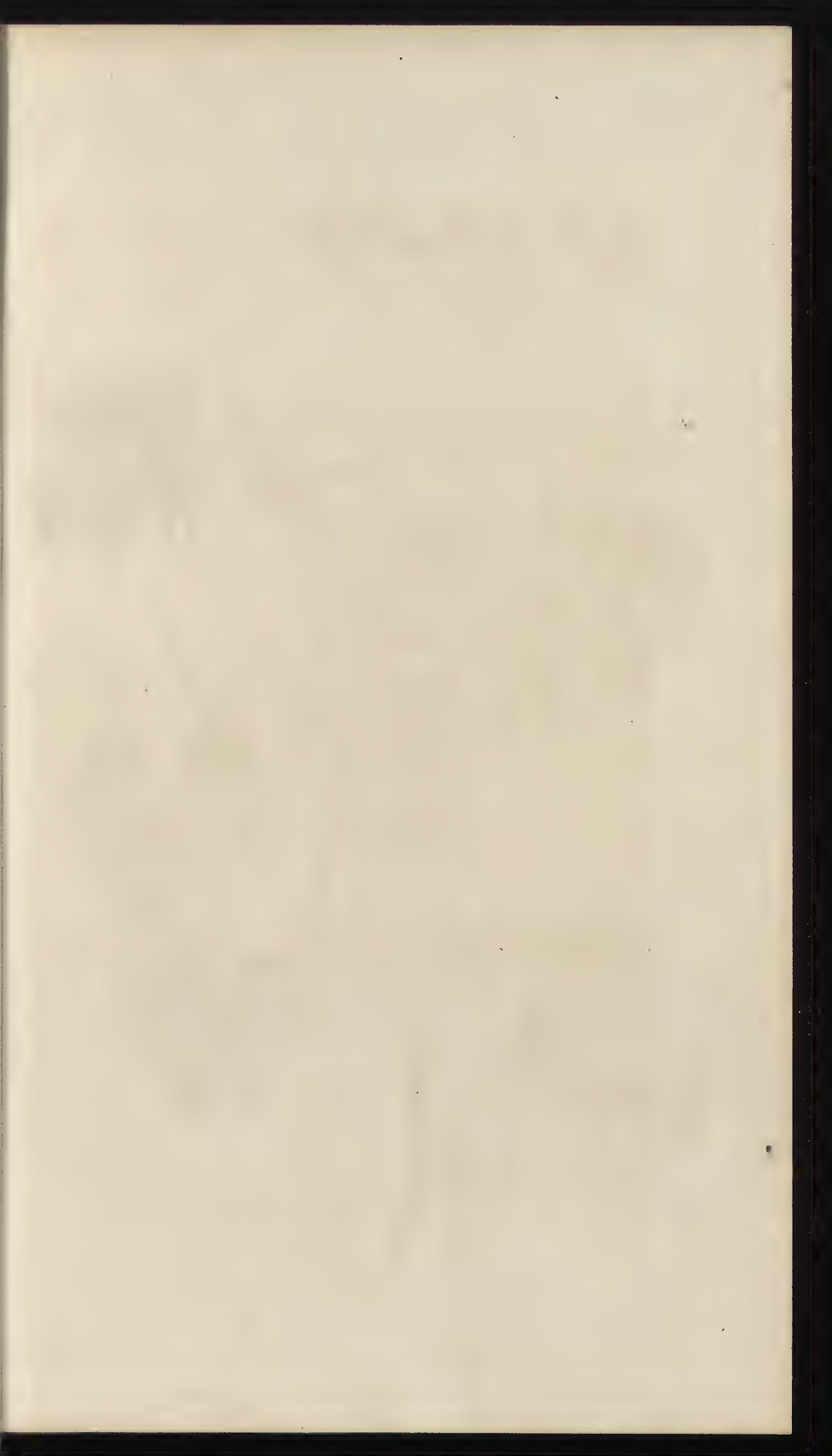
Duchess of Gloucester's Geranium. *Hortulanorum.*

Stem shrubby, with few branches; *branches* rather succulent, stiff, flexuose, covered with soft downy hairs. *Leaves* of a round kidney shape, some lobed, others not, generally concave, unequally toothed with blunt rigid teeth, which are terminated with a sort of callous mucro, rather glossy above, but covered on both sides with soft hairs; *the upper leaves* which accompany the flowers are wedge-shaped, entire at the base, and rigidly toothed at the apex; *nerves* prominent. *Petioles* very thick, flattened on the upper side, and a little compressed on the lower, thickly covered with soft hairs. *Stipules* broadly cordate, acuminate, downy, and ciliate. *Umbels* growing in panicles, spreading in every direction; *peduncles* 4 to 6 flowered. *Involucre* of several unequal bractes, of a round oval shape, obtuse, ending in a sharp point, downy, and ciliate. *Pedicles* unequal in length, shorter than the nectariferous tube, downy. *Calyx* 5-cleft; *segments* unequal, the back one widest, ovate, erect, the others narrower, lanceolate and reflexed, all ending in a sharp point. *Nectariferous tube* about the length of the calyx, a little flattened on each side and covered with soft hairs. *Corolla* of 5 petals, the 2 uppermost widest, of a roundish oval, obtuse, dark rose coloured, with a dark spot in the centre, under which are 2 white lines, from which branch various red and dark lines in

different directions; 3 lower petals oblong, obtuse, dark rose colour. *Filaments* 10, united at the base, 7 only bearing anthers. *Pollen* of a dark orange colour. *Germen* downy. *Style* slightly hairy, purple. *Stigmas* 5, purple, reflexed.

This beautiful plant is known in many of our collections by the title of the Duchess of Gloucester's Geranium: we have named it from the curious circumstance of water dissolving the colour of its petals, a circumstance which we first observed in a plant which had been watered over the flowers in the greenhouse, and have often noticed it since, in plants out of doors, after a shower of rain, or watering over head: we have likewise noticed the same effect in some other kinds of nearly the same colours, but in a less degree. We suppose it to be of hybrid origin, perhaps between *P. cucullatum*, or *P. angulosum*, and some other kind; it comes the nearest to *P. cochleatum* of *Willdenow's Enumeratio* of any we have seen described: it is a robust and free-growing plant, continues in flower a great part of the year, and will thrive in any tolerably good soil, or a mixture of loam and leaf mould will suit it as well as any. Cuttings strike root freely in the same kind of soil, and a common greenhouse or light room is sufficient to protect it in winter, when it should be watered sparingly.

The drawing was taken at the nursery of Messrs. Colvill and Son, in the King's Road, in September last.





Geranium sylvaticum L. (B. & H. July 1, 1821)

J. Miller sc.

PELARGONIUM obtusifolium.

Blunt-leaved Stork's-bill.

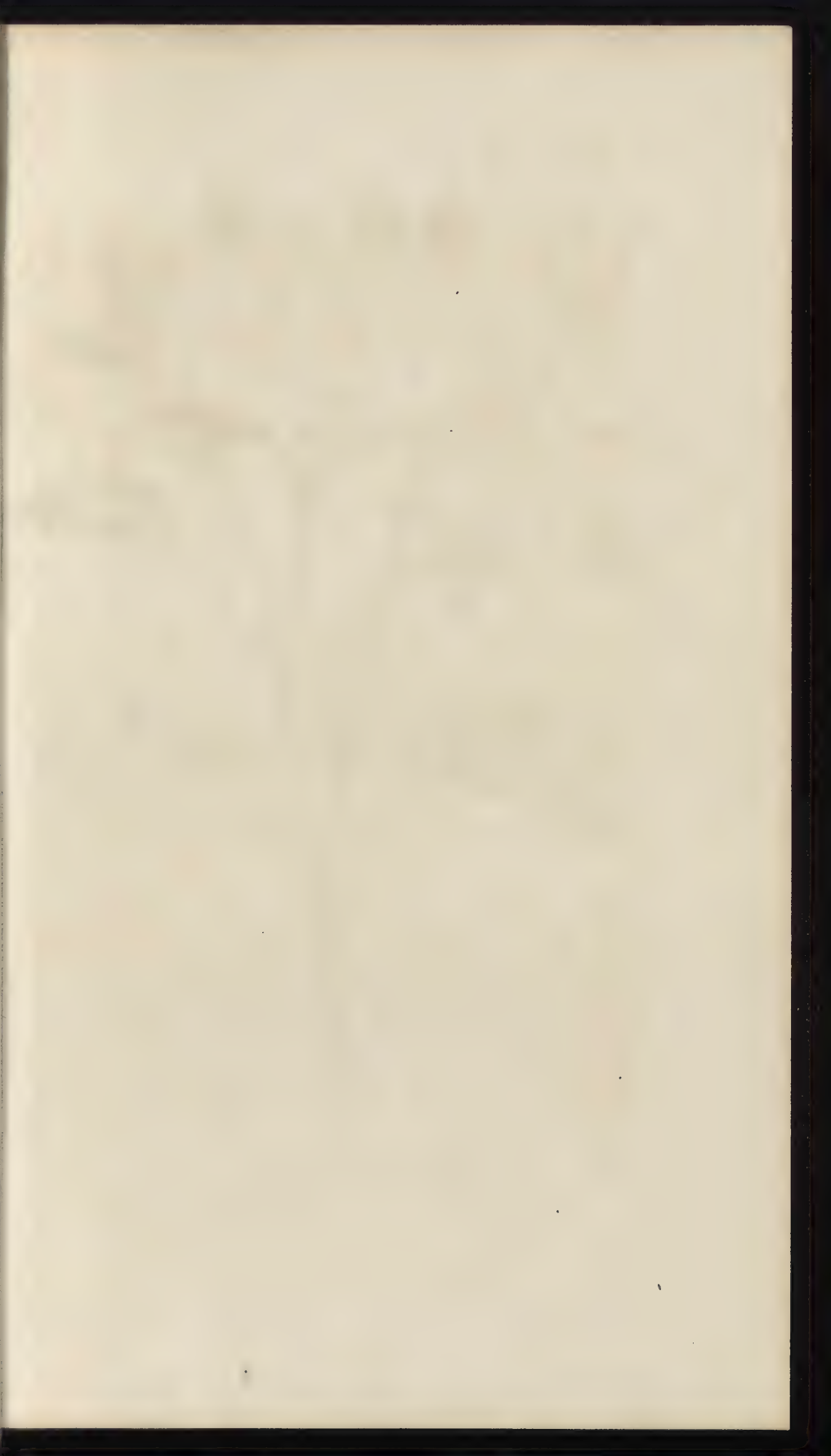
P. obtusifolium, pedunculis paucifloris, foliis trilobis planis obtusissimis, lobis divaricatis inæqualiter dentatis, stipulis latis cordatis, tubo nectarifero calyce longiori.

Stem shrubby, of a woody texture, very much branched; *branches* spreading, of a shining green, clothed with unequal hairs. *Leaves* flat, about an inch long, and 2 inches in breadth, deeply 3-lobed; *lobes* very blunt, unequally toothed with small sharp teeth; slightly hairy, and covered with a very short pubescence; *nerves* numerous, prominent, hairy. *Petioles* longer than the leaf, flat and channelled on the upper side, and a little rounded below. *Stipules* very short, broadly cordate, ending in an acute point, fringed, 3 to 5 nerved. *Peduncles* few flowered. *Involucre* of 6 short ovate bractes; *bractes* concave, ciliate, taper-pointed. *Pedicels* short, slightly hairy. *Calyx* of 5 veiny lanceolate segments, upper and lower ones erect, side ones reflexed. *Nectariferous tube* a little longer than the calyx, flattened on each side, hairy. *Petals* 5, the 2 upper ones obovate of a bluish rose colour, with a red spot in the centre, and below it branch dark lines in various directions; lower petals oblong or broadly lanceolate, obtuse, of a pale rose colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* light red, hairy at the base and smooth on the upper part. *Stigmas* 5, reflexed.

We suspect this plant is of hybrid origin, perhaps between *P. adulterinum* and some other: it is a free

grower and an abundant flowerer, and appears very showy when covered with bloom; it thrives well in a rich loamy soil mixed with a little rotten dung or decayed leaves, and only requires protection from frost, and not to be overwatered in winter. Cuttings root freely, planted in pots and placed in a shady situation.

Our drawing was taken at the nursery of Mr. Dennis, Chelsea, the beginning of May.





Des. by J. H. ... 1825.

P. M. ...

PELARGONIUM eximium.

Select Stork's-bill.

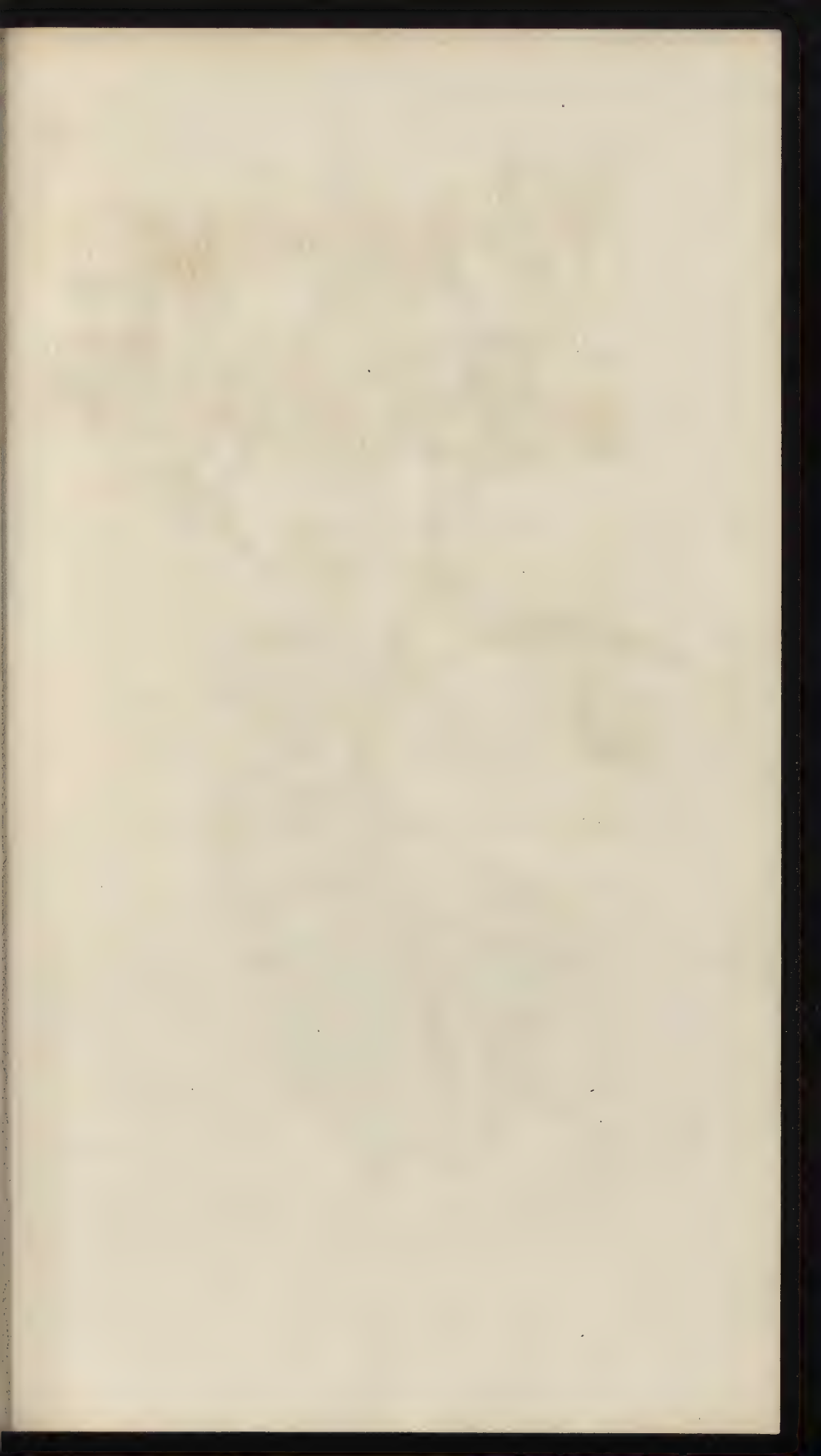
P. eximium, umbellis multifloris, foliis cordatis rugosis undulatis septemlobis inæqualiter dentatis basi dilatatis, calycibus reflexis, tubo nectarifero calycis longitudine.

Stem shrubby, erect; *branches* erect, thickly covered with soft hairs. *Leaves* cordate, undulate, rugged and uneven, 7-lobed, hairy on both sides, dilated at the base, with recurved points; *lobes* obtuse unequally toothed with short ciliated teeth. *Petioles* thick, widely flattened and furrowed on the upper side, and convex on the lower, thickly clothed with soft unequal hairs. *Stipules* widely cordate, acute, ciliate, sometimes toothed. *Peduncles* very hairy, bearing many-flowered umbels. *Involucre* of several cordate or lanceolate acute bractes. *Pedicles* very short, about half the length of the nectariferous tube. *Calyx* 5-cleft, segments all reflexed or revolute, lanceolate, thickly covered with soft villous hairs. *Nectariferous tube* about the length of the calyx, flattened on both sides, very hairy. *Petals* all obovate, two uppermost widest, of a pale rose colour, with a bright crimson spot in the centre; below and across barred with short dark lines, and in the middle an arrow-shaped mark: lower petals pale rose colour. *Filaments* 10, united at the base, 7 bearing anthers. *Anthers* obtuse. *Pollen* orange-coloured. *Style* red, very hairy. *Stigmas* 5, spreading.

This pretty plant is of hybrid origin, and seems to be intermediate between *P. capitatum* and *P. augustum*: it is a very free grower and abundant flowerer, and as

hardy as any of the genus; being a strong grower, it requires a rich loamy soil, mixed with a little rotten dung or decayed leaves. Young cuttings root freely in the same kind of soil, planted in pots, and placed in a shady situation.

Our drawing was taken at the nursery of Mr. Davey in May last; we also received a specimen of what we believe to be the same in an imperfect state, from Messrs. Brown and Co. of Slough, under the name of *Geranium Murrayanum*.





PELARGONIUM papilionaceum.

Butterfly Stork's-bill.

P. papilionaceum, umbellis multifloris paniculatis, foliis subrotundo-cordatis angulatis, petalis binis superioribus obovatis duplo calyce longioribus, tribus inferioribus linearibus calyce duplo brevioribus.

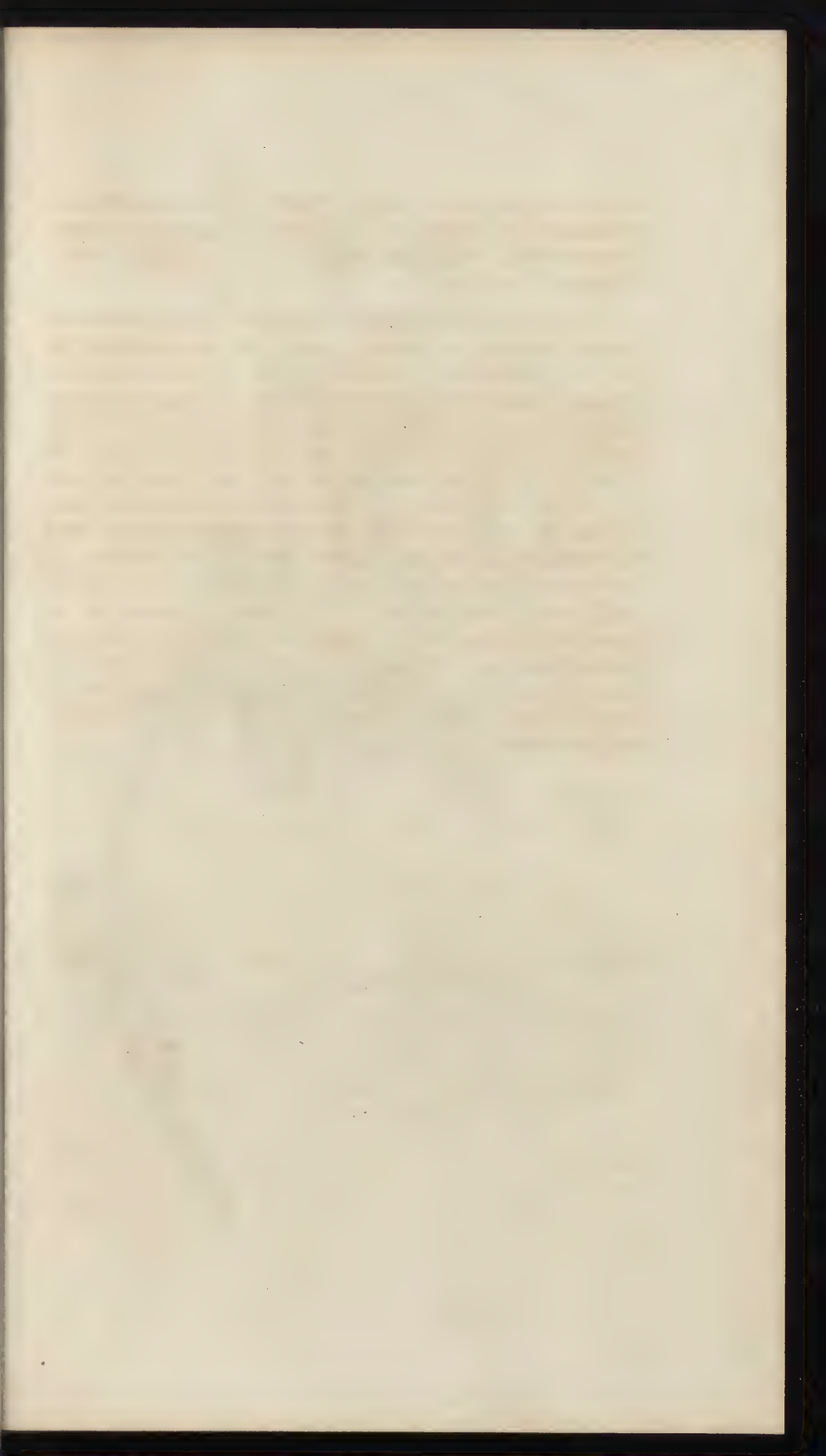
Pelargonium papilionaceum. *Willden. sp. pl.* 3. p. 671. *Persoon syn.* 2. p. 231. *Hort. Kew. ed.* 2. v. 4. p. 174. *Cavan. diss.* 4. p. 244. t. 112. f. 1. *Dill. elth.* p. 124. t. 128. f. 155.

Geranium africanum arborescens, malvæ folio mucronato, petalis florum inferioribus vix conspicuis. *Martyn dec.* 15.

Stem shrubby, erect branching; *branches* terminated with large panicles of flowers. *Leaves* roundly cordate, shallowly and bluntly crenate; lower ones angulate or slightly 5-lobed; upper ones nearly round or slightly angular; all of a dark green colour, rugose, and blistered on the upper side, and covered on both sides with short stiff hairs. *Petioles* flattened and channelled on the upper side, and rounded below, thickly covered with soft hairs. *Stipules* widely cordate, sometimes toothed, fringed, and taper-pointed. *Umbels* several-flowered, growing in large panicles. *Peduncles* and *calyx* very hairy. *Calyx* of 5 unequal, lanceolate, acute segments. *Nectariferous tube* very short and blunt, more than 3 times shorter than the calyx. *Petals* 5, 2 upper ones obovate, twice as long as the calyx, of a rose colour, lightest at the outsides, with a dark spot in the centre, which joins 2 lines that proceed from the base; lower petals linear, not

half the length of the calyx, white or pale blush colour. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* and *aristas* villous. *Style* red, very hairy. *Stigmas* 5, reflexed.

For an opportunity of giving this curious and very distinct species of *Pelargonium*, we are indebted to Mr. W. Anderson, curator of the Botanic Garden, Chelsea, who has lately reintroduced it, it having disappeared from our collections for several years. In our opinion it is as handsome as any of the genus; for although the flowers are not so large as in some others, yet their abundance and curious form make up that deficiency: it is a strong vigorous-growing plant, and continues in bloom the greater part of the summer; a rich lightish soil suits it best, or a mixture of two thirds turfy loam, and the rest peat or decayed leaves: it requires but little water in winter, as too much wet is very injurious to it. Cuttings root freely planted under a hand-glass, or in pots placed in a shady situation: it also produces plenty of seeds, by which any number may be raised.





Geranium peltatum L. f. var. *gigas* L. f.

W. H. Miller del.

PELARGONIUM scintillans.

Sparkling Stork's-bill.

P. scintillans, umbellis plurifloris, foliis cuneatis ovatis inæqualiter dentatis incisive, caule flexuoso adscendente: geniculis tumidis.

Pelargonium scintillans. *Hoare MSS.*

Stem shrubby, very much branched; *branches* flexuose, ascending, of a purplish colour and swelled at the joints; thickly covered with short hairs. *Leaves* wedge-shaped, or sometimes cordate, slightly 5-lobed, deeply and unequally toothed with blunt rounded teeth; thickly covered on both sides with a short soft pubescence. *Petioles* about twice the length of the leaf, slightly furrowed on the upper side, downy. *Stipules* widely lanceolate, taper-pointed, and ciliate. *Umbels* 4 to 6 flowered. *Peduncles* thickened at the base, very hairy. *Involucre* generally of 6 bractes; *bractes* lanceolate, concave, acute, very hairy. *Pedicles* longer than the nectariferous tube, downy. *Calyx* of 5 lanceolate acute segments. *Nectariferous tube* hardly as long as the calyx, flattened on both sides, downy. *Petals* 5, 2 uppermost ovate, of a pale scarlet, with a forked white mark at the base, from which branch short dark stripes; lower petals oblong, obtuse, of a lighter colour with darker veins. *Filaments* 10 united at the base, 7 only bearing anthers, which are seldom or never perfect. *Germen* very hairy. *Style* hairy and green on the lower part, and red and smooth above. *Stigmas* 5, purple and revolute.

We have lately had the pleasure of visiting the superb and well-managed collection of *Geraniaceæ* be-

longing to Sir R. C. Hoare, with which we were highly gratified, being far beyond our expectations in beauty and variety: from a specimen of one of these our drawing was taken; it is of hybrid origin, having been raised by Sir Richard from the seed of *P. fulgidum*: for the following account we are obliged to him: "*P. scintillans* raised from the seed of the original *fulgidum*, at the same time with the *ignescens*. I had a third variety at the same time, varying in foliage, but a bad flower."

In our account of *P. ignescens*, No. 2, we were doubtful whether it was a hybrid production or a real species. This now clears up the point. They have certainly very little affinity to the original, or with each other; and we have lately seen plants raised from the seeds of *P. ignescens* which differ much more from that than these do from each other.

We have seldom seen this plant in health, and never in flower in a perfect state, in the neighbourhood of London; yet it appears to thrive well and flower abundantly in Sir Richard's collection, and Mr. Colvill has some plants at present that are thriving very well: it is not a tender plant, as we find the more airy the situation where it is kept, the healthier it is: it thrives best with us in a mixture of rather more than one half of light turfy loam, and the rest peat or decayed leaves, and likes a moderate supply of water. Cuttings strike root very freely planted in pots and placed in a shady situation.





PELARGONIUM grandiflorum.

Great-flowered Stork's-bill.

P. *grandiflorum*, pedunculis trifloris, foliis quinque-
lobo-palmatis glaucis dentatis; lobis divergentibus
acutis basi ciliato-denticulatis, petalis calyce sub-
triplo longioribus, tubo nectarifero calyce triplo
longiori.

Pelargonium grandiflorum. Willden. *sp. pl.* 3. p. 674.
Pers. syn. 2. p. 231. *Hort. Kew. ed.* 2. vol. 4. p.
175.

Geranium grandiflorum. Andrews's *reposit.* 12.

Stem shrubby, erect, smooth and shining, not much
branched. *Branches* erect, glaucous, rather slender.
Leaves smooth, glaucous; lower ones deeply 5-7 lobed;
lobes divergent, acute, deeply toothed at the points,
and slightly denticulate at the base, upper leaves deeply
3-lobed or nearly trifid. *Petioles* cylindrical, glaucous.
Stipules broadly cordate, very obtuse, entire. *Pe-
duncles* generally 3-flowered. *Involucre* of 5 lanceolate
acute bractes. *Pedicles* cylindrical, about half the
length of the nectariferous tube. *Calyx* 5-cleft, seg-
ments narrowly lanceolate, acute, ciliate. *Nectari-
ferous tube* about 3 times the length of the calyx,
slightly hairy. *Petals* 5, nearly 3 times longer than
the calyx, 2 uppermost obovate, white, marked with
red branching lines at the base, lower ones broadly
spatulate, white. *Filaments* 10, united at the base, 7
only bearing anthers. *Pollen* orange-coloured. *Ger-
men* and *aristæ* sericeous. *Style* white, hairy at the
base, and smooth above. *Stigmas* 5, reflexed.

This fine species of *Pelargonium* is now become scarce in the collections about London, the rage after novelty having made it a good deal neglected; it is also rather tenderer than most of the shrubby kinds, and is very liable to be injured by too much wet in winter: the best soil for it is a mixture of rather more than half of light turfy loam, and the rest peat or decayed leaves. Cuttings root freely planted under hand-glasses, or in pots placed in a sheltered situation. There are a great number of hybrid plants, whose origin may be traced between this species and several others; some of them are very beautiful.

Our drawing was taken from a plant in the select collection of Geraniaceæ belonging to Robert Jenkinson, Esq. to whom we are obliged for much useful information concerning the different kinds, and from whose collection we may expect many rare and beautiful subjects.





PELARGONIUM rubescens.

The Countess of Liverpool's Stork's-bill.

P. rubescens, umbellis plurifloris, foliis cordatis quinquelobis undulatis inæqualiter profundeque dentatis mollibus, stipulis ovatis acuminatis dentatis, tubo nectarifero calyce parum longiori.

Pelargonium rubescens. Jenkinson MSS.

Stem shrubby, tall, erect, of a purplish colour, not much branched. *Branches* spreading, of a purplish tint, very hairy, as is every other part of the plant except the corolla. *Leaves* cordate, 5-lobed, undulate, deeply but unequally toothed, with sharp brown cartilaginous teeth. *Petioles* longer than the leaf, flattened and slightly channelled on the upper side, and rounded below. *Stipules* ovate, sharply acuminate, often forked, dentate. *Peduncles* generally 4-5 flowered. *Involucre* of 6 or 7 lanceolate acute bractes, all covered with soft hairs. *Pedicles* about the length of the nectariferous tube, villous. *Calyx* 5-cleft, villous, segments very unequal, lanceolate, reflexed. *Nectariferous tube* a little longer than the calyx, flattened on both sides, much thicker than the pedicle. *Petals* 5, two uppermost broadly ovate, of a bright reddish colour, approaching to scarlet, with a white mark in the centre, barred with dark purple stripes, which branch in various directions; lower petals oblong of a lighter colour, with a darker shade down the middle of each. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* densely villous. *Style* red, hairy on the lower part, and smooth above. *Stigmas* 5, purple and revolute.

This beautiful plant is of hybrid origin, and we think it intermediate between *P. ignescens* and the large variety of *P. cucullatum*, known in collections by the appellation of the *Royal George Geranium*: it was raised from seeds in the collection of the Earl of Liverpool, at Coombe Wood, where our drawing was taken in May last.

Mr. Smith, the gardener, informs us, that it was from the seed of *P. ignescens*, and he has several other curious mules very different from each other, which have been raised from the seeds of *P. ignescens*, *P. ardens*, and *P. fulgidum*. Mr. Colville has also raised a very fine one from seed, which we have named *P. pavoninum**: the colour is a light scarlet with a beautiful dark spot in the centre of each upper petal.

This is a very free, strong-growing plant, and is no doubt as hardy as any of the genus, thriving well in a mixture of turfy loam and peat, or decayed leaves, and appears likely to grow to as large a size as *P. cucullatum*. Cuttings root easily, planted under hand-glasses, or in pots placed in a shady situation.

* *P. pavoninum*, pedunculis 3-5 floris, foliis cordato-cuneatis undulatis quinquelobis rigidis duplicato-dentatis; marginibus incurvis, petiolis apice valde dilatatis margine inflexis conniventibus.





Helianthus divaricatus L. f. *Helianthus* L. f. *Helianthus* L. f.

J. Walp. sc.

PELARGONIUM pulchellum.

Nonesuch Stork's-bill.

P. pulchellum, caule carnoso suffruticoso, scapo diviso, foliis oblongis sinuato-pinnatifidis, stipulis latis lanceolatis, petiolis basi adnatis.

Pelargonium pulchellum. *Botan. magaz.* 524. *Pers. synops.* 2. p. 228. *Hort. Kew. ed.* 2. vol. 4. p. 165. non *Willdenovii*.

Geranium pictum. *Andrews's reposit.* 168?

Stem suffruticose, short and succulent, a little branched. *Leaves* oblong, sinuate or nearly pinnatifid, segments oblong or lanceolate, entire, or sometimes toothed, covered with short soft down. *Stipules* large, oblong or lanceolate, acute, fringed, and joined to the lower part of the petiole. *Scape* divided, leafy underneath the peduncles. *Peduncles* downy, many-flowered. *Involucre* of many lanceolate or subulate bractes, connected at the base; *bractes* acute, reflexed. *Flowers* on the outsides of the umbels on long pedicles, and in the middle sessile. *Calyx* 5-cleft, segments lanceolate, acute, back one erect, the others reflexed or revolute. *Nectariferous tube* very long, hairy, flattened and channelled on both sides. *Petals* 5, two uppermost widest, obovate, white marked with a faint red speck; lower ones spatulate, white with a broad lively red stripe down the middle of each. *Filaments* 10, united at the base, 7 bearing anthers. *Anthers* obtuse. *Pollen* yellow. *Style* red, slightly hairy at the base. *Stigmas* 5, reflexed.

Our drawing of this plant was taken at the nursery of Mr. Thomas Jenkins, of the New Road and Regent's

Park: it belongs to a tribe different from any we have yet published, and which will perhaps form a distinct genus of themselves; to it belong *P. lobatum*, *triste*, *filipendulifolium*, *flavum*, *ardens*, *quinquevulnerum*, *bicolor*, and some others.

This pretty species is a native of the Cape of Good Hope, and, according to the Hortus Kewensis, was introduced in 1795: it is one of the early flowering species, being in flower from March till May, and seldom flowers after that period: it is not so easily managed as the tribe in general, being very apt to suffer with too much wet after its blooming season is over. The best soil for it is an equal quantity of light turfy loam and peat, and a good deal of sand mixed with it; the pots should also be well drained with potsherds broken small, that the wet may pass off readily, and it requires scarcely any water when not in a growing state. Cuttings strike root freely, but these are sparingly produced: to make up that deficiency, pieces of the root, planted in pots with the top just above the surface, will produce young plants, but they require scarcely any water till they begin to grow, when they may be planted singly in small pots.





PELARGONIUM Daveyanum.

Davey's Stork's-bill.

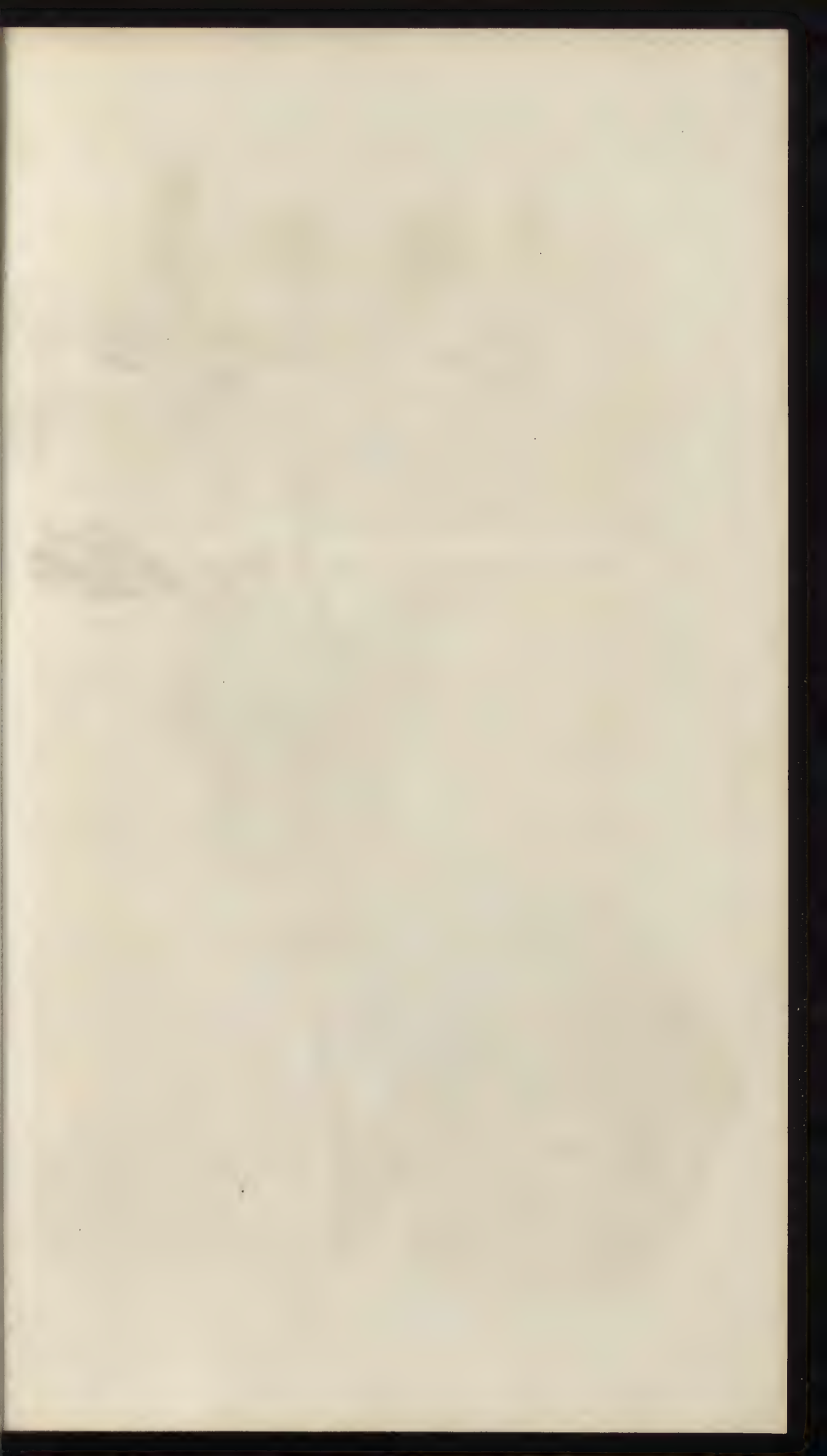
- P. *Daveyanum*, pedunculis subquadrifloris, foliis cordato-reniformibus undulatis leviter quinquelobis dentatis villosis mollibus, tubo nectarifero calyce parum breviori.
-

Stem shrubby, branching. *Branches* thickly covered with long soft hairs. *Leaves* either cordate or kidney-shaped, slightly 5-lobed, rigidly toothed, undulate or crumpled between the lobes, thickly clothed on both sides with soft villous hairs. *Petioles* thick, widely flattened above and rounded below, villous. *Stipules* broadly cordate, with acute points, generally toothed, and thickly covered with long hairs. *Peduncles* generally 4-flowered. *Involucre* of several bractes, some ovate, others lanceolate, acute, villous. *Pedicles* unequal in length. *Calyx* 5-cleft, upper segment much the widest, erect, the others lanceolate, acute, reflexed, covered with soft villous hairs. *Nectariferous tube* about the length, or hardly so long as the calyx, flattened on both sides. *Petals* 5, two upper ones obovate, of a dark carlet, deepest at the outside, beautifully marked with crimson in the middle, and barred with innumerable dark marks and lines, which branch in all directions; lower petals oblong, obtuse, of a lighter colour. *Filaments* 10, united at the base, 7 only bearing anthers, and these have not as yet been produced perfect. *Style* red. *Stigmas* 5, purple reflexed.

This handsome plant is a hybrid production; we have named it in honour of Mr. Davey, who raised it from seed, and to whom our gardens are indebted for many

valuable acquisitions in this family; it appears to be intermediate between *P. ignescens* and *P. Barringtonii*, and was without doubt produced between them: it seems to be a free grower and an abundant flowerer, and continues in bloom for a long time; should it hereafter produce perfect anthers, its flowers will be still finer: from its appearance we believe it to be as hardy as any of the genus, and requires the same treatment as the free-growing kinds: nothing will be more liable to injure it than too much wet in winter. Cuttings will root freely planted under hand-glasses, or in pots placed in a sheltered situation.

Our drawing was taken at the nursery of Mr. Davey in June last.





PELARGONIUM involucratum, α .

Large-bracted Stork's-bill.

-
- P. *involucratum*, umbellis multifloris, foliis cordato-reniformibus rigidis subangulatis inæqualiter cartilagineo-dentatis, bracteis magnis ovatis pedicello longioribus, calycibus reflexis, tubo nectarifero calyce breviori.
- α . *maximum*, foliis rigidissimis argute dentatis, floribus maximis albis macula medio et striis atropurpureis. *Suprà fig.*
- β . *albidum*, foliis flaccidioribus, floribus minoribus albis lineis purpureis et macula mediâ obscurioribus.
- γ . *incarnatum*, floribus incarnatis macula mediâ obscuris rubris lineis ramosis atrosanguineis pictis. Commander in Chief Geranium. *Hortulanorum*.
- δ . *intermedium*, foliis magis undulatis, floribus pallide incarnatis macula medio magno et lineis ramosis atrosanguineis pictis. Davey's High Admiral Geranium. *Hortulanorum*.
- ϵ . *lilacinum*, foliis maximis, floribus magnis lilacinis lineis paucioribus minus ramosis.
- ζ . *roseum*, foliis minoribus, floribus roseis macula mediâ obscuris rubris lineis ramosis atropurpureis pictis.

Stem shrubby, erect, growing to a great size, not much branched. *Branches* erect, or a little spreading, thickly clothed with long soft hairs. *Leaves* kidney-shaped or cordate, generally pointed, rigid, slightly angular, deeply toothed, with very unequal cartilaginous teeth: *nerves* numerous, very prominent on the lower

side and furrowed on the upper. *Petioles* flat and furrowed on the upper side, and convex below, dilated upwards, and thickly covered with long soft hairs. *Stipules* widely cordate, fringed, deeply toothed, and ending in an acute point. *Peduncles* many-flowered, thickly covered with long soft unequal hairs. *Involucre* of several bractes, often joined at the base; *bractes* ovate, concave, ending abruptly in an acute point, very hairy. *Pedicles* short, scarcely as long as the bractes. *Calyx* 5-cleft, segments narrowly lanceolate, acute, reflexed when in flower, thickly clothed with soft villous hairs. *Nectariferous tube* short, flattened on both sides, much shorter than the calyx. *Petals* 5, the 2 uppermost broadly ovate, in our variety, α . white a little inclining to blush, with a beautiful dark crimson spot in the centre, and from the base branch dark purple stripes, which branch again towards the upper part, and are lighter at the outsides; lower petals ovate, white, faintly marked with red lines at the base. *Filaments* 10, united at the base, 7 bearing anthers. *Style* purple, hairy below, and smooth on the upper part. *Stigmas* 5, purple and revolute.

This fine plant is of hybrid origin, and is intermediate between *P. cucullatum* and *P. superbum* (*Geranium speciosum* of Andrews, but not *P. speciosum* of Willdenow): we have enumerated several varieties of it, which differ chiefly in size and colour, and we have seen several others, but have not had an opportunity of examining them; they are all fine showy plants and free growers, thriving well in a light turfy loam mixed with a little peat or decayed leaves. Cuttings root readily, planted in pots and placed in a sheltered situation.

Our drawing was taken from a fine plant in the collection of the Earl of Liverpool at Coombe Wood, where it was raised from seed by Mr. Smith.





Thalictrum flavum L. f. *Thalictrum flavum* L. f. *Thalictrum flavum* L. f. *Thalictrum flavum* L. f.

PELARGONIUM coriandrifolium.

Coriander-leaved Stork's-bill.

P. coriandrifolium, pedunculis 3-5-floris, foliis bipinnatis: foliolis pinnatifidis linearibus, floribus pentandris, corollis subtetrapetalis; petalis superioribus margine inæqualibus, caule sublævi.

Pelargonium coriandrifolium. *Willden. sp. pl.* 3. p. 663. *Pers. syn.* 2. p. 230. *Hort. Kew. ed.* 2. p. 170. *Jacqu. ic.* 3. t. 528. *Collect.* 5. p. 142. *Cavan. diss.* 4. p. 263. t. 116. f. 1.

Stem herbaceous, flexuose, branching, smooth, and swollen at the joints, of a brown colour. *Branches* spreading, slightly hairy. *Leaves* bipinnate, smooth and shining, points recurved or revolute; *leaflets* pinnatifid or toothed, upper ones entire, ending in a blunt point. *Petioles* very unequal in length, flat on the upper side and round below, slightly hairy. *Stipules* cordate or sometimes lanceolate, ending in an acute point. *Peduncles* cylindrical, slightly hairy, 3 to 5 flowered. *Involucre* generally of 6 lanceolate acute bractes; *bractes* keeled, reflexed. *Pedicles* very short, slightly hairy. *Calyx* 5-cleft, thickly covered with short rigid hairs, upper segment lanceolate 3-nerved, side ones linear or subulate, taper-pointed. *Nectariferous tube* a little longer than the pedicle, not half the length of the calyx, nearly cylindrical. *Corolla* mostly of 4 petals, except the lower flower of each umbel, which has generally 5: *upper petals* obovate, margins very unequal, of a blush colour, with two red lines which are joined at the base, each forked at the top, and slightly branched; *lower petals* narrowly spatulate, of a pale blush. *Filaments* 10, united at the

base, 5 only bearing anthers; *antheriferous filaments* nearly of the same length, overtopping the style; *anthers* surrounding the stigma; *barren filaments* alternate with the others, short and subulate. *Pollen* yellow. *Seeds* brown and smooth. *Capsules* downy. *Awns* spiral, bearded inwards. *Style* flesh-coloured, slightly hairy below, and smooth above. *Stigmas* 5, purple, reflexed.

Our drawing of this curious species of *Pelargonium* was taken at the nursery of Messrs. Colvill and Son, who lately received it from Messrs. Sweet and Miller's Bristol Nursery: it belongs to a very distinct tribe, which might with propriety be formed into a genus. To it belong *P. myrrhifolium*, *bullatum*, *lacerum*, *longicaule*, *anemonifolium*, *multicaule*, *caucalifolium*, *minimum*, and some others.

The species belonging to this section are mostly free growers and easily cultivated: they succeed well in a light loamy soil, mixed with a little peat or decayed leaves, and are fond of a light airy situation. Cuttings root as free as those of any of the shrubby kinds, and seeds also ripen in abundance.

The species is native of the Cape of Good Hope, and, according to *Hortus Kewensis*, was cultivated in 1724 in the Chelsea Botanic Garden.





PELARGONIUM oblatum.

Oblate-leaved Stork's-bill.

P. *dilatatum*, umbellis multifloris, foliis oblatis, rotundato-cordatis 5-7-lobis apice recurvis basi imbricatis inter lobos conduplicatis; lobis obtusissimis æqualiter dentatis, calycibus reflexis, tubo nectarifero subsessili calyce sesquolongiori.

Stem shrubby, growing to a great size, branching. *Branches* spreading, thickly covered with long soft hairs. *Leaves* very large, of a dark green colour, lower ones about 5 inches long and 6 wide, cordate, 5-7 lobed, imbricate at the base, folded in between the lobes, points recurved, thickly covered on both sides with long soft hairs; *lobes* very blunt, toothed with short, nearly equal teeth. *Petiole* widened upwards, flattened and channelled on the upper side and convex underneath, very hairy. *Stipules* short, broadly cordate, generally toothed, ending in an acute point, fringed and very hairy. *Peduncles* very hairy and many-flowered. *Involucre* of several bractes; *bractes* ovate, keeled, mucronate, densely villous. *Pedicles* very short, not half the length of the bractes. *Calyx* 5-cleft, segments very unequal, lanceolate, acute, villous, all reflexed when in bloom. *Nectariferous tube* about $1\frac{1}{2}$ times the length of the calyx, flat on both sides and thickly clothed with long soft hairs. *Petals* 5, very long, all obovate, 2 uppermost of a light rose colour, with a bright red spot in the centre, and below that it is marked with white, which joins 2 prominent nerves from the base, from which branch numerous dark purple stripes in different directions, lower petals of rather a lighter rose colour. *Filaments* 10, united at

the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* dark red, hairy below, and smooth on the upper part. *Stigmas* 5, purple, reflexed.

This fine plant is a hybrid production; in habit and foliage it approaches nearest to *P. capitatum*, but its flowers are nearer related to *P. eximium*: it grows to a great size, and makes a fine appearance when in full bloom; it is also a very hardy kind, requiring only a common greenhouse or warm room to protect it from the frost in winter, and being a very free growing kind it requires more water than many others of the genus: a mixture of light turfy loam and peat, or decayed leaves, suits it very well, and cuttings root freely planted under hand-glasses, or in pots placed in a sheltered situation.

Our drawing was taken from a plant at the nursery and botanic garden of Mr. Tate, Sloane Street, where it has been in fine bloom all the summer.





Done by J. Rodriguez 171. Dec. 1844.

PELARGONIUM elegans.

Elegant Stork's-bill.

P. elegans, pedunculis multifloris, foliis elliptico-subrotundis argute serratis obtusis rigidis glabris, petalis omnibus obovatis, caule suffruticoso erecto. *Willden. sp. pl.* 3. p. 655. *Hort. Kew. ed.* 2. vol. 4. p. 167. *Pers. syn.* 2. p. 229.

α . *major* caule altiore, foliis majoribus, floribus paucioribus minoribus, striis pallidioribus. *Supra fig.* α . *Pelargonium elegans, major. Hoare MSS.*
Geranium elegans. Andrews's reposit. 28.

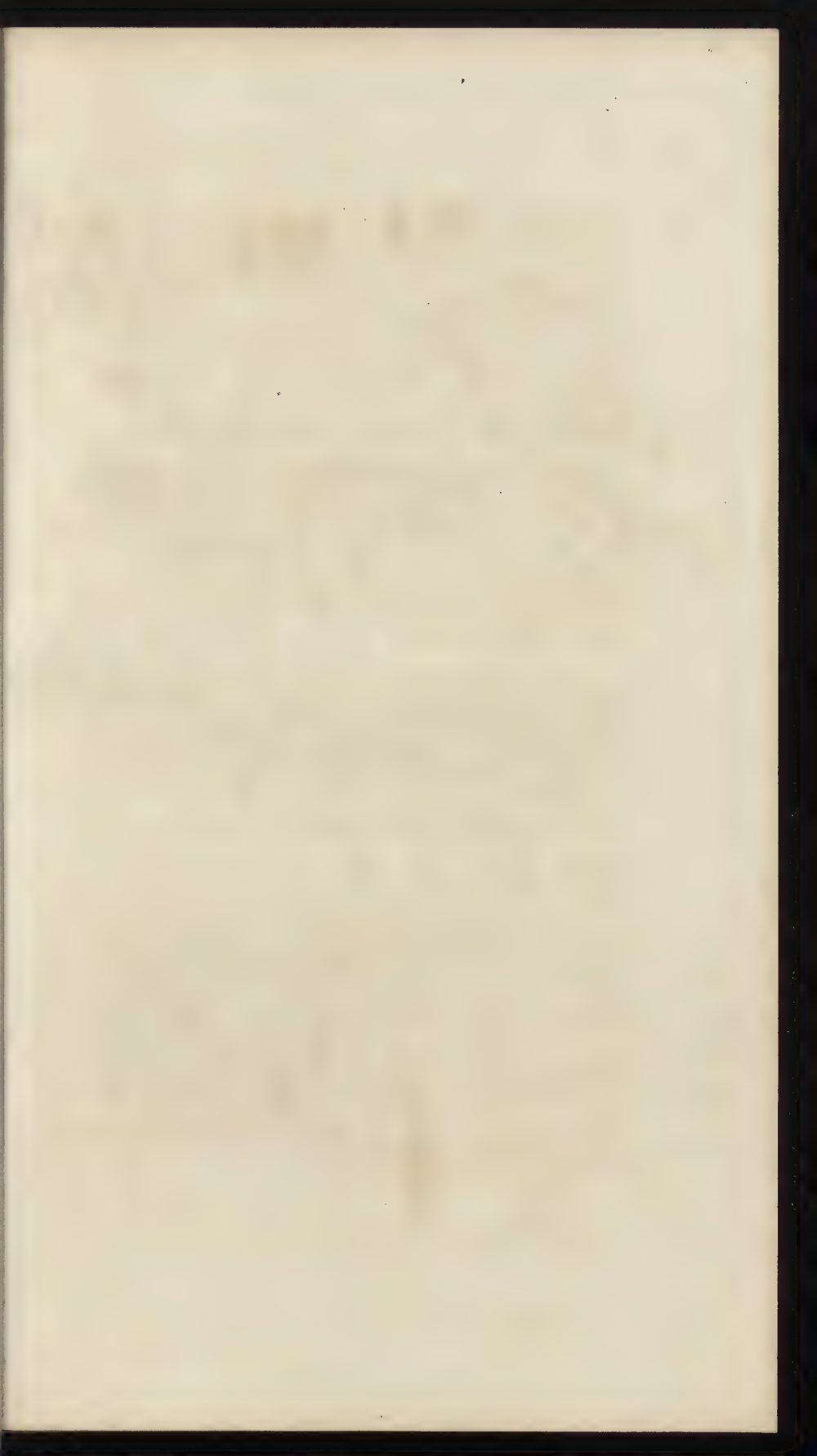
β . *minor*, caule humiliore, foliis minoribus, floribus numerosioribus majoribus medio rubro et striis atropurpureis pictis. *Suprà fig.* β .
Pelargonium elegans, minor. Hoare MSS.

Stem suffruticose, erect, very rugged and uneven, occasioned by the persistent stipules. *Branches* short, crowned with a tuft of leaves. *Leaves* rigid, nearly orbicular, obtuse, sharply and deeply toothed, smooth and shining on both sides; *nerves* pubescent. *Petioles* very long, slightly flattened, and furrowed on the upper side, and rounded on the lower; thickly clothed with soft downy hairs, as are the peduncles and calyx. *Stipules* lanceolate, sometimes cordate, keeled, and ending in an acute point. *Peduncles* branched; *umbels* several-flowered. *Involucre* of many bractes; *bractes* lanceolate, keeled, concave and taper-pointed. *Pedicles* about 3 times the length of the nectariferous tube, villous. *Calyx* 5-cleft, segments unequal, reflexed, concave. *Nectariferous tube* about the length of the calyx,

much flattened on both sides and furrowed. *Petals* 5, two uppermost broadly obovate, of a blush colour in var. β . stained with red in the middle, and elegantly painted with dark marks, in var. α . much paler, and the lines less branched; lower petals pale blush with darker veins. *Filaments* 10, connected at the base, 7 bearing anthers, which are incumbent, obtuse, but ending in a point. *Pollen* orange-coloured. *Style* hairy, purple. *Stigmas* 5, purple and revolute.

Our drawing of this beautiful variety of *P. elegans* was taken from a fine specimen which we obtained at Sir R. C. Hoare's last May, where we saw several fine plants of it flowering in the greatest perfection; it is a much finer variety than the old *P. elegans* of which we have given a single flower at the bottom of the figure to show the difference.

This species seems to be intermediate between three of our sections; its flowers nearly approach what we call the true *Pelargonium*; in habit it is nearer to the section of *P. carinatum*, *P. tricolor*, &c. and it is also related to the section of *P. pulchellum*, *P. bicolor*, &c.; perhaps with *P. ovale* it should form a distinct genus: it requires rather more than ordinary treatment to have it in perfection; in the first place the pots should be well drained with potsherds, that the water may pass readily off, as nothing is more injurious to it than too much wet, particularly when it is not in a growing state: the best soil for it is an equal quantity of sandy loam and peat. Cuttings root pretty freely, but they must have but little water till they have struck, or they are apt to rot. The readiest way of propagating it is by pieces of the root planted in a pot, with their tops just above the surface; these require but little moisture till they begin to grow, when they may be transplanted in small pots, and watered regularly.





PELARGONIUM Seymouriæ.

Mrs. Seymour's Stork's-bill.

P. Seymouriæ, pedunculis paucifloris, foliis basi cuneatis v. cordatis oblatis trilobis undulatis denticulatis, calycibus nervosis reflexis, tubo nectarifero calyce longiori.

Stem shrubby, branching. *Branches* thickly clothed with long white hairs. *Leaves* cordate or sometimes wedge-shaped at the base, oblate, 3-lobed, undulate, slightly toothed with short rounded teeth, strongly nerved on the lower side and furrowed on the upper, thickly covered on both sides with short hairs; *lower leaves* 3 inches wide and 2 long. *Petioles* widely flattened and slightly furrowed on the upper side, and convex below, very hairy. *Stipules* cordate, acute, generally entire, ciliate, slightly keeled. *Peduncles* few-flowered, thickly clothed with very unequal hairs. *Involucre* generally of 6 cordate, acute bractes, which are fringed and nearly as long as the pedicle. *Pedicles* short but unequal in length. *Calyx* 5-cleft, segments very unequal, of a reddish brown colour, upper one oval, with an acute point, many-nerved, erect; the others widely or narrowly lanceolate, acute, reflexed. *Nectariferous tube* a little longer than the segments of the calyx, flat and channelled on both sides, gibbous at the base, of a brown colour and very hairy. *Petals* 5, 2 uppermost roundly obovate, of a bluish rose-colour, with a dark crimson spot in the centre, and from the base branch a few dark stripes; lower petals oblong, obtuse, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* silky. *Aristas* very hairy.

Style dark red, hairy on the lower part, and smooth on the upper. *Stigmas* 5, purple, reflexed.

This fine plant is of hybrid origin, and was raised from seeds by Messrs. Colvill and Son, at whose nursery our drawing was taken. We have named it in honour of Mrs. Seymour, of Woburn, Bedfordshire, a great admirer of plants and an encourager of botanical science. In habit it approaches to some of the Citron-scented kinds, but the flowers are nearer related to *P. solubile*: it is nearer of kin to *P. Lousadianum* than any other with which we are acquainted; but in that the leaves have much longer teeth, and the nectariferous tube is nearly twice the length, besides the very different colour of the flowers. It is a very hardy free growing sort, requiring only a common greenhouse or light room to protect it from the frost in winter; a mixture of loam and peat, or decayed leaves, suits it very well, and cuttings are easily rooted, if planted in pots in the same kind of soil, and placed in a shady situation.





Ranunculus acris L. 1820

Watts

HOAREA setosa.

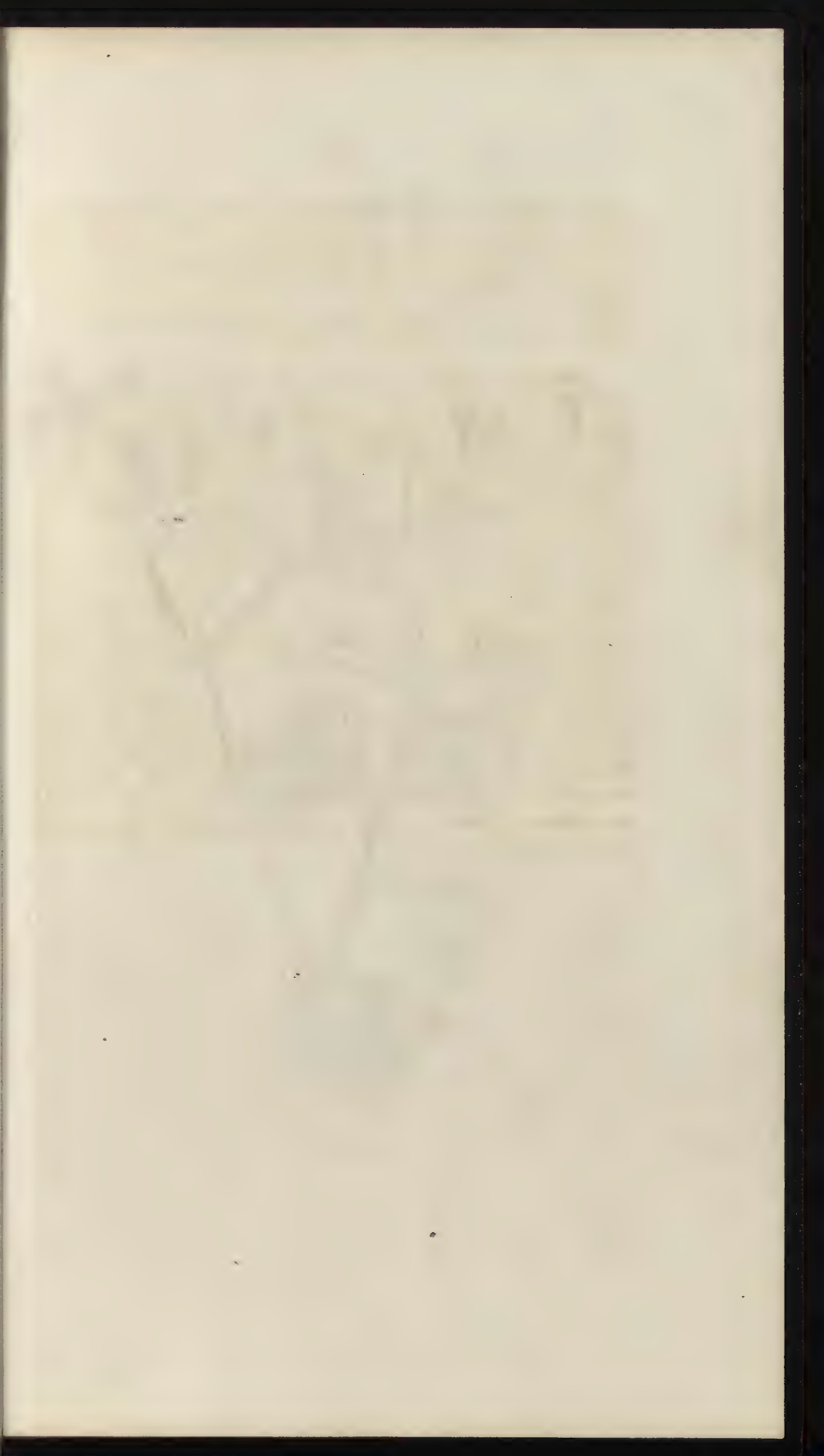
Bristle-pointed Hoarea.

H. setosa, umbella composita, foliis pinnatis; pinnis bipartitis: segmentis subtrifidis dentatis obtusis pubescentibus apice setosis, petalis superioribus refractis; inferioribus subconniventibus, tubo nectarifero subsessili calyce duplo longiori.

Root tuberous, finger-shaped, rather smallest at the lower part, from which proceed other smaller tubers. *Stem* none. *Leaves* in clusters at the crowns of the root, pinnate, some much more divided than others; *pinnæ* opposite, generally bipartite; *segments* mostly trifid or deeply 3-toothed, obtuse, thickly covered with a white pubescence, and terminated with several bristle-like hairs; *middle segment* again 3-toothed. *Petioles* a little flattish on the upper side and rounded below, clothed with stiff unequal hairs, with 2 narrowly lanceolate acute stipules attached to the base. *Scape* branching, with little clusters of bracte-like leaves at the base of the peduncles, some lanceolate, others linear, entire or pinnatifid, with sharp points. *Peduncles* cylindrical, downy, with a few long rigid hairs interspersed. *Umbels* many-flowered. *Involucre* of several narrowly lanceolate acute bractes, terminated at the point with a rigid hair. *Calyx* 5-cleft, segments lanceolate, acute, upper segment reflexed about half way down, the others reflexed nearly to the base when the flower is expanded, but is again erect when in fruit. *Nectariferous tube* nearly sessile, about twice the length of the calyx, much flattened on both sides, and clothed with short hairs. *Petals* 5, the 2 back ones spatulate, bent back like rabbit's ears, of a pale rose colour,

marked with short branching red lines; lower ones oblong, obtuse, concave at the base, a little connivent, of a pale rose colour. *Filaments* 10, connected into a tube, every other one bearing anthers. *Pollen* yellow. *Germen* and *Aristæ* villous. *Style* flesh-coloured, very hairy. *Stigmas* 5, purple, reflexed.

Our drawing of this neat little species of *Hoarea* was taken from the fine collection of Robert Jenkinson, Esq. where it continued in bloom for a length of time with several other curious Cape species: it seems to be one of the species that is not so difficult of cultivation as some others: it succeeds well in an equal portion of loam, peat, and sand; the pots must also be well drained with potsherds broken small, as the young fibres from the tubers are very fond of getting amongst them. When the roots are in a dormant state they should be kept without water, till they are inclined to grow afresh, when they may be planted in fresh pots and watered regularly: the best way of increasing them is from the little tubers of the roots planted in small pots with their tops just above the surface of the mould; these require but little water till they begin to grow, when they must be transplanted in small pots. Seeds are often ripened, which is the best way of getting young healthy plants.





PELARGONIUM ornatum.

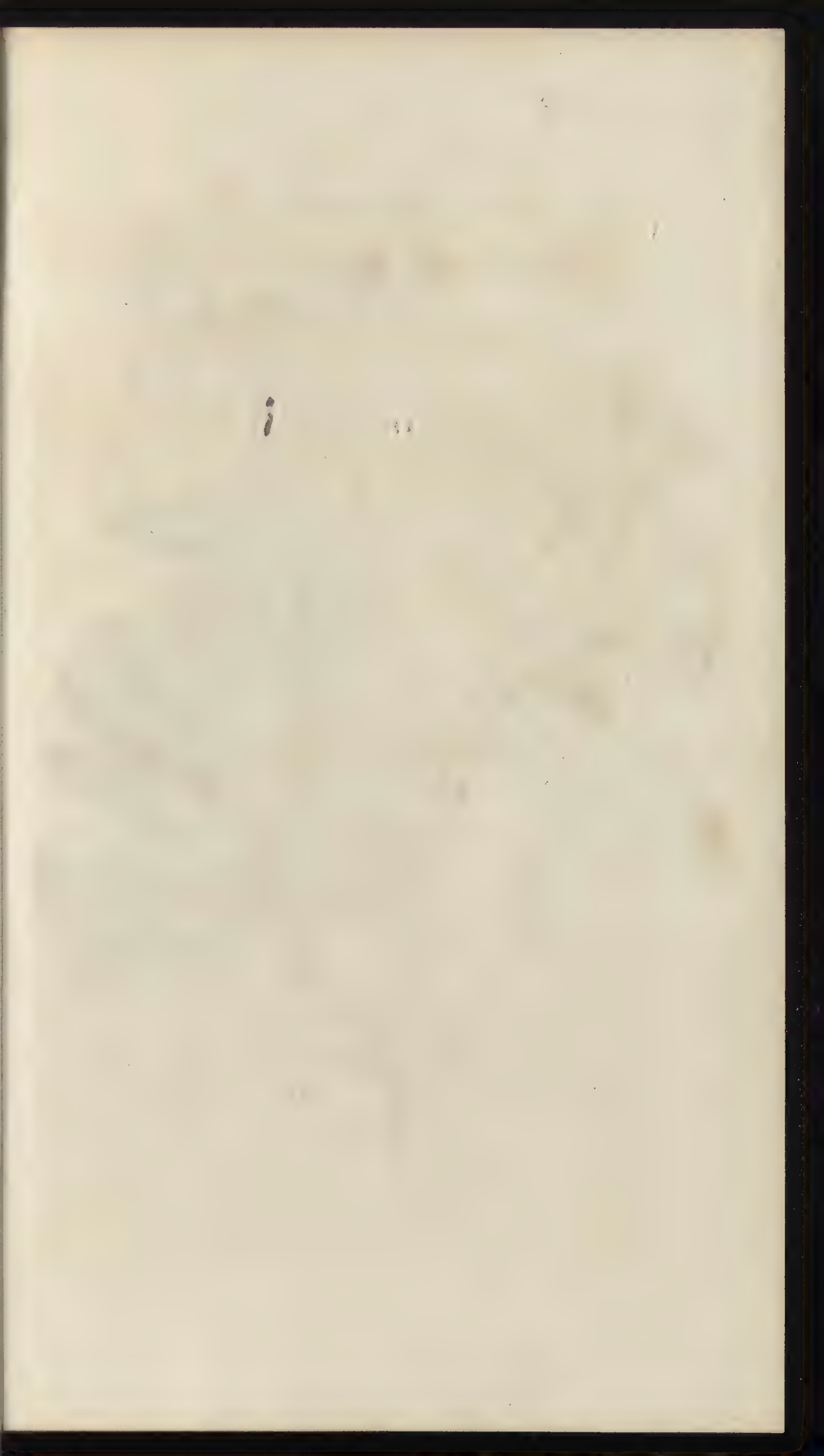
Ornate Stork's-bill.

P. ornatum, pedunculis 3-4 florisve, foliis basi cuneato-cordatis trilobis undulatis inæqualiter dentatis hirsutis, calycibus revolutis, pedicellis fructiferis declinatis, caule ramosissimo: ramis diffusis.

Stem shrubby, very much branched. *Branches* spreading, tinged with red, thickly covered with soft white unequal hairs, as is every other part of the plant, except the corolla. *Leaves* small, wider than long, between cordate and wedge-shaped at the base, 3-lobed, undulate or curled at the margins, very unequally toothed, strongly ribbed underneath and furrowed above, of a dark green colour. *Petioles* flattened above and convex below, much dilated towards the leaf. *Stipules* short, widely cordate, convex above and concave below, generally entire, and ending in an acute point. *Peduncles* 3 to 4-flowered, cylindrical, a little swollen at the base. *Involucre* of 6 bractes; *bractes* ovate or widely lanceolate, keeled, acute-pointed, spreading. *Pedicles* about the length of the nectariferous tube, erect when in flower, but declining when in fruit. *Calyx* 5-cleft, segments unequal widely lanceolate, revolute when the flowers are expanded, and recurved when in fruit. *Nectariferous tube* about the length of the calyx, flat and keeled on one side and channelled on the other, gibbous at the base. *Petals* 5, a little undulate, 2 uppermost obovate of a clear white, with a bright red spot in the centre, which joins 2 forked lines of the same colour that are slightly branched; lower petals oblong, obtuse, clear white. *Filaments* 10, united at the base, 7 only bearing an-

thers. *Pollen* orange-coloured. *Capsules* and *aristæ* densely hairy. *Style* flesh-coloured, hairy on the lower part, and smooth on the upper. *Stigmas* 5, purple, reflexed.

Our drawing of this pretty plant was taken from a fine specimen communicated by Messrs. Sweet's and Miller, from their extensive collection at the Bristol nursery. We suppose it to be a hybrid production, being nearly related to *P. crispum*, also to *P. hermannifolium* and several others: it is a hardy greenhouse plant, and takes up but little room, as it may be grown in a small pot: it continues to flower in succession nearly all the summer; a mixture of loam and peat, or decayed leaves, suits it very well, or any other light vegetable mould; and young cuttings root freely planted in pots and placed in a sheltered situation.





PELARGONIUM pavoninum.

Peacock-spotted Stork's-bill.

P. pavoninum, pedunculis plurifloris, foliis cordato-cuneatis quinquelobis rigidis duplicato-dentatis; marginibus crispis incurvis, petiolis apice valde dilatatis margine inflexis conniventibus.

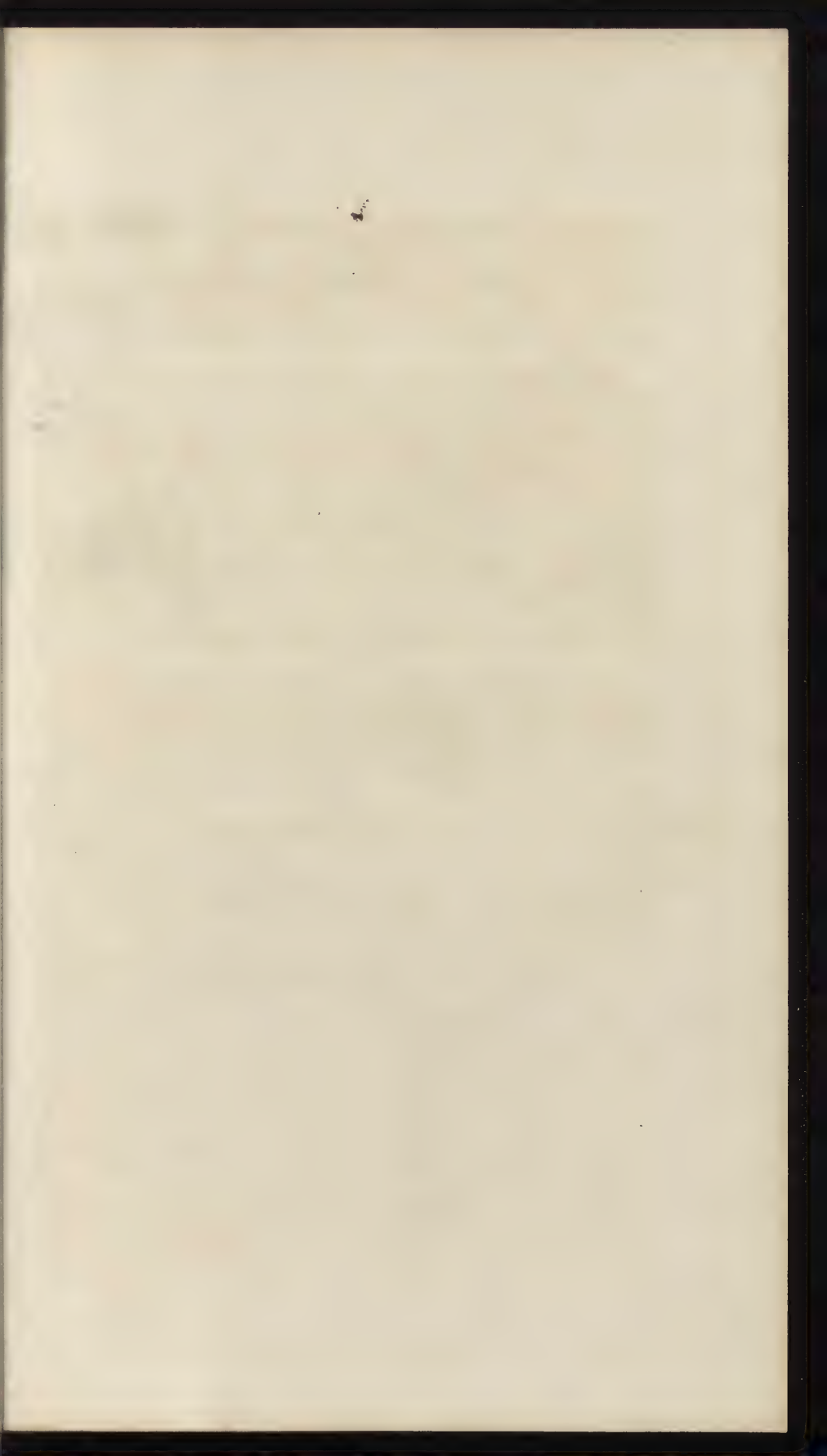
Pelargonium pavoninum. *Suprà No. 30.*

Stem shrubby, branching. *Branches* spreading, thickly clothed with soft white unequal hairs. *Leaves* wedge-shaped at the base, inclining to cordate, folded into a kind of tube where joined to the petiole, rigid, doubly toothed with large stiff cartilaginous teeth, generally brown at the points, densely pubescent on both sides, and strongly nerved underneath. *Petioles* much flattened and slightly furrowed on the upper and convex on the lower side; dilated at the upper part, where the margins turn in so as to form a tube, thickly covered with long white hairs. *Stipules* ovate with an acute point, sometimes toothed, slightly keeled and ciliate. *Peduncles* from 3 to 7 flowered, thickly covered with soft white unequal hairs. *Involucre* of 6 or 7 bractes; *bractes* lanceolate, acuminate, concave, strongly keeled, sometimes toothed, very hairy. *Pedicels* about the length of the calyx, bending upwards. *Calyx* 5-cleft, segments unequal, lanceolate, acute, villous. *Nectariferous tube* unequal in length, generally about the length of the calyx, flattened on both sides and gibbous at the base. *Petals* 5, two uppermost widely obovate, of a bright red or pale scarlet, with a beautiful dark velvet spot in the centre, and several dark lines from the base, which are slightly

branched; lower petals of an oblong oval, obtuse, of a lighter colour, with darker veins. *Filaments* 10, only 7 bearing anthers. *Germen* and *aristæ* villous. *Style* blush colour, hairy at the base and smooth on the upper part. *Stigmas* 5, purple, reflexed.

This beautiful plant is a hybrid production, having been raised by Mr. Colvill from the seeds of *P. ignescens*, mixed with some other kind, we believe *P. solubile*, as it seems exactly intermediate between the two: we think it one of the handsomest that has yet been raised: it is a free-growing plant, and continues to flower in succession all the summer and till late in autumn: it grows freely in a mixture of the greater part light turfy loam and the rest peat; and young cuttings take root readily, planted in pots in the same kind of soil, and placed in a shady situation.

Our drawing was taken at the nursery of Messrs. Colvill and Son, where there are also plants of *P. rubescens* for sale, some of which are now in full bloom.





PELARGONIUM floridum.

Abundant-flowering Stork's-bill.

Pelargonium. Pet. 5 inæqualia; duo superiora approximata. Stam. inæqualia; 3 sterilia subulata. *Lindley MSS.*

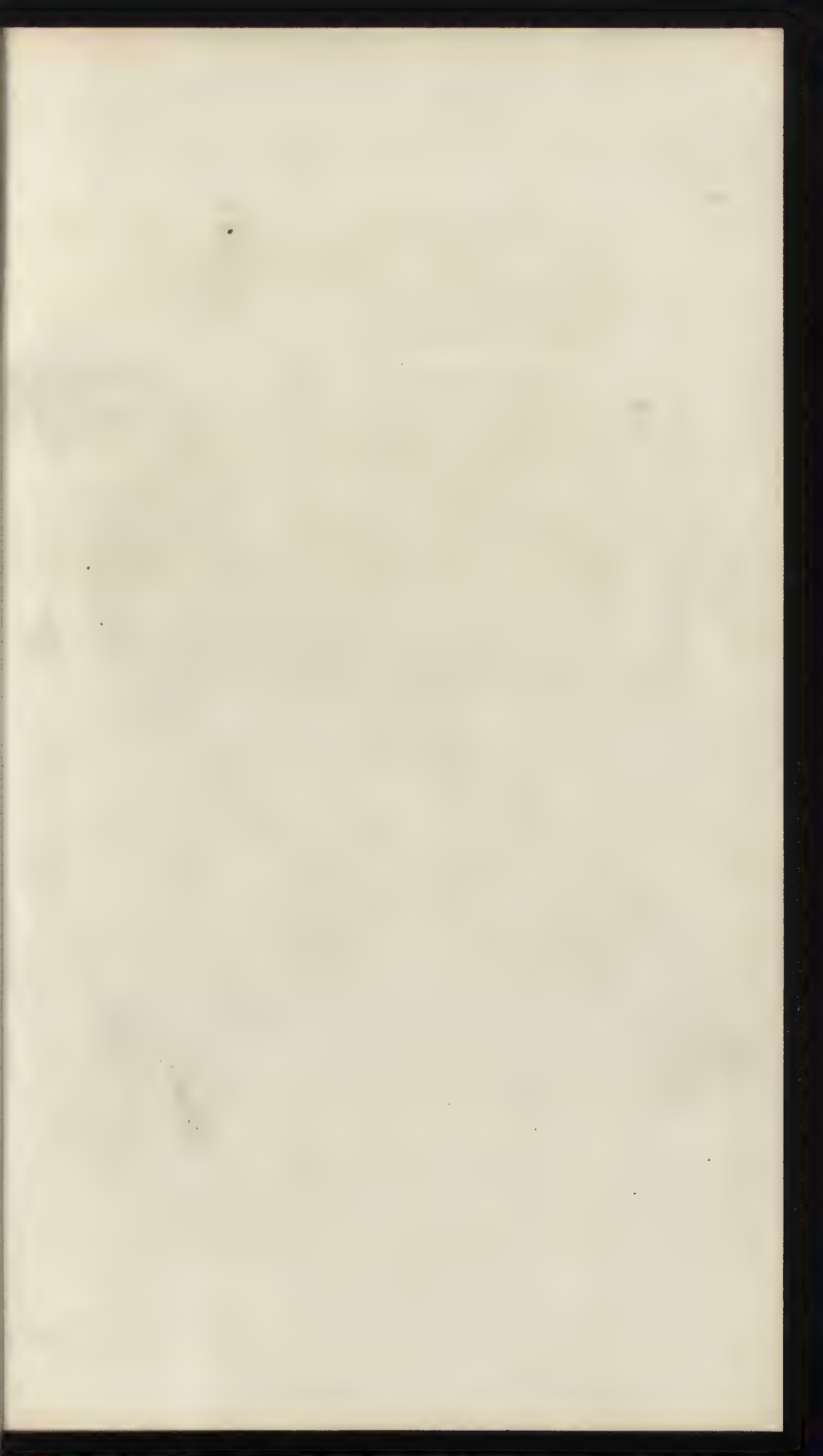
P. floridum, umbellis numerosis multifloris, foliis cordatis quinquelobis inæqualiter et argute dentatis, stipulis latis cordatis carinatis subdentatis, tubo nectarifero longitudine calycis.

Pelargonium autumnale. Hortulanorum.

Stem shrubby, very much branched. *Branches* thickly clothed with long soft hairs. *Leaves* cordate, acute, a little undulate, sharply but unequally toothed, with numerous furrows above and prominent nerves below; hairy on both sides; of a light yellowish green colour. *Petioles* wide, and channelled on the upper side, a little rounded below: hairy. *Stipules* broadly cordate, acute, ciliate, sometimes dentate, keeled. *Umbels* numerous, many-flowered. *Peduncles* unequal in length, cylindrical, very hairy. *Involucre* of several bractes; *bractes* widely lanceolate, acute, concave, keeled, and ciliate. *Petioles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, carinate, generally 3-nerved, thickly covered with very small warts. *Nectariferous tube* about the length of the calyx, flattened and furrowed on each side. *Petals* 5, two uppermost widely obovate, of a bluish rose colour, with a large dark crimson spot in the centre, and numerous dark lines from the base, which branch in all directions: lower petals oblong,

or nearly oval, obtuse, of a paler colour, with red veins at the base. *Filaments* 10, connected at the base. **7** only bearing anthers. *Pollen* orange-coloured. *Germen* silky. *Awns* villous. *Style* purple, very hairy. *Stigmas* 5, purple, reflexed.

The drawing of this plant was taken from a fine specimen, sent by Sir R. C. Hoare, with several others. It is known in some of our collections by the name of *P. autumnale*; but, as we are acquainted with several others that are more strictly autumnal, we have changed that title to *floridum*. It is, without doubt, of hybrid origin; most likely produced between *P. acerifolium* and some other. A free-growing kind, and very hardy, thriving in a common greenhouse or warm room; and requires the same kind of soil as the other strong-growing sorts. Cuttings soon strike root if placed in a sheltered situation.





PELARGONIUM humifusum.

Trailing Stork's-bill.

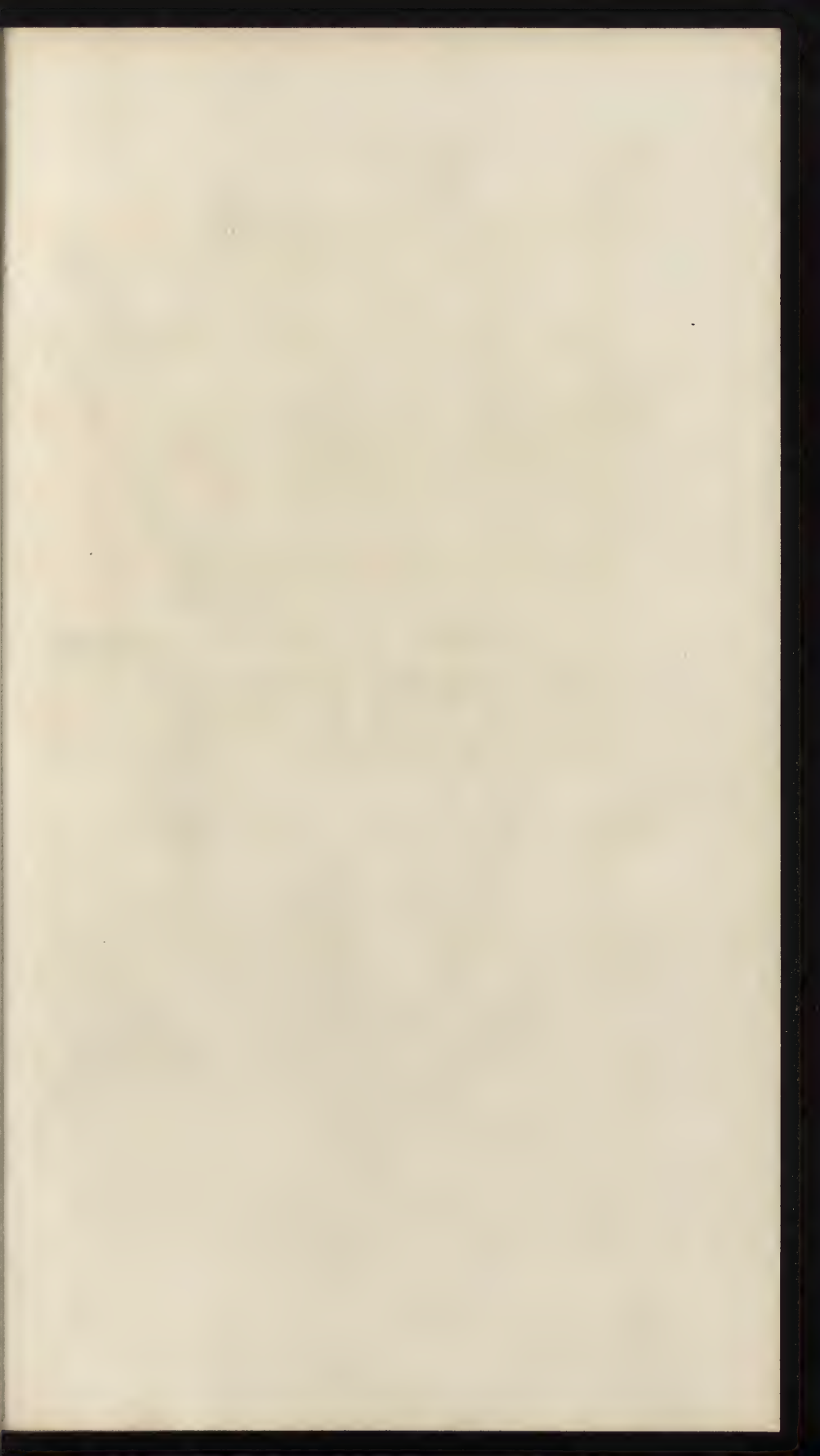
P. *humifusum*, pedunculis plurifloris, foliis cordatis subtripartitis quinquelobisve dentatis, cauleque tereti herbaceo humifuso pubescentibus, petalis superioribus minoribus, tubo nectarifero calyce breviori.

Pelargonium humifusum. Willden. enum. supp. 47. Jacq. eclog. 148. tab. 99. Hort. sub. lond. p. 151. n. 67.

Stems herbaceous, prostrate, spreading flat on the ground, and branching off in all directions: very thick and swollen at the base. *Branches* cylindrical, pubescent, when in rich soil extending to a great length. *Leaves* cordate, generally 3-parted, nearly to the base, or deeply 5-lobed; lower segments again 2 or 3 lobed, unequally toothed with blunt rounded teeth, covered on both sides with a white mealy pubescence. *Petioles* flattened and channelled on the upper side, and rounded below; dilated at the apex, and covered all over with short stiff hairs. *Stipules* short, cordate, ending in an acute point, fringed, and very hairy. *Peduncles* axillary, cylindrical. *Umbels* 4 to 6 flowered. *Involucre* generally of 6 bractes, united at the base; *bractes* ovate or broadly lanceolate, concave, keeled, ciliate, and thickly covered with short hairs. *Pedicels* short, a little longer than the nectariferous tube. *Calyx* 5-cleft; segments unequal, some ovate, the others lanceolate, erect. *Petals* 5, linearly wedge-shaped, the 2 uppermost shortest; white, each marked with 3 bright red spots, 3 lower ones pale rose colour, with a red spot in the middle of each. *Filaments* 10, united at

the base, 5 of which are sterile, every other one only bearing anthers. *Capsule* densely hairy. *Awns* spiral, very hairy, and bearded inwards. *Style* very short, hairy. *Stigmas* 5, pale red, reflexed.

Our drawing of this curious little plant was taken at the Garden of the Horticultural Society, where it was raised from seed, received from Dr. Fischer, of Moscow. We are informed by Mr. Otto, the superintendant of the Botanic Garden at Berlin, that he has frequently raised it from seeds received from the Canary Islands, so that there is little doubt but it is a native there. It is a neat little plant, and continues to flower all through the summer, and would make a pretty appearance cultivated as a hardy annual in the front of flower-borders; but it would be requisite to raise the plants under hand-glasses, or in a greenhouse, and then transplant them out in the open ground, in the same manner as China Asters, or other half-hardy annuals. It will thrive well in any rich light soil; and cuttings root freely under hand-glasses, or in pots placed in a shady situation.





Geranium pinnatifidum L. f. *Bot. Beech.* 1721.

1721.

PHYMATANTHUS tricolor.

Three-coloured Wart-flower.

Phymatanthus. Pet. 5 inæqualia: duo superiora approximata suprà unguem verrucosa. Stam. tubo brevissimo: 5 fertilia recurvo-patentia; 5 sterilium duo superiora paulo elongata recta. *Lindley MSS.*

P. tricolor, pedunculis subtrifloris, foliis lanceolatis villosa-canescens inciso-dentatis subtrifidis, petalis superioribus minoribus, caule suffruticoso erecto, tubo nectarifero calyce duplo breviori.

Pelargonium tricolor. *Willden. sp. pl.* 3. p. 660. *Pers. syn.* 2. p. 229. *Hort. Kew. ed.* 2. v. 4. p. 169. *Bot. magaz.* 240.

Pelargonium violarium. *Jacq. ic. rar.* 3. t. 527. *collect.* 5. p. 129.

Geranium tricolor. *Andrews's geran. c. ic.*

Stem suffruticose, erect, branching, of a brown colour, very rough and rugged, occasioned by the persistent stipules. *Branches* short, spreading. *Leaves* various in form, lanceolate, sometimes trifid, deeply incised or toothed, thickly covered with soft white hairs, some of the lower incisures again toothed. *Petioles* long and slender, flat on the upper side and convex below, thickly clothed with soft white reflexed hairs. *Stipules* subulate, dilated at the base, persistent. *Peduncles* cylindrical, generally 3-flowered, recurved when in bud, but curved back when the flowers are expanded; thickly covered with spreading unequal hairs. *Involute* of 6 subulate spreading bractes. *Pedicels* cylindrical, bent in the same manner as the peduncle, the flowers leaning forward. *Calyx* 5-cleft,

segments unequal, lanceolate, keeled, all reflexed when the flowers are expanded, thickly clothed with soft villous hairs. *Nectariferous tube* short, a little flattened and keeled on each side, scarcely half the length of the calyx. *Petals* 5, the two uppermost shortest, nearly orbicular, concave, of a dark red colour, netted all over with faint black lines; at the base, above the unguis, is a bright black spot, warted with little shining tubercles; lower petals obovate, white, frequently a little stained with red. *Filaments* 10, scarcely connected at the base, 5 only bearing anthers, 5 fertile ones recurvedly-spreading, sterile ones erect, short, the 2 upper ones rather longest. *Pollen* of a dark orange-colour. *Germen* and *awns* densely villous. *Style* purple, slightly hairy. *Stigmas* 5, purple, reflexed.

Our drawing of this plant was taken at the nursery of Messrs. Colvill and Son. We have thought it expedient to separate it with some others into a distinct genus; and have been kindly permitted by Mr. Lindley to adopt a name and character from his manuscripts, as well as for some other distinct groups of this tribe. Mr. Lindley thinks the species which we mentioned in our account of *Pelargonium carinatum*, may, with that, lay the foundation of another genus, which he proposes to name *Campylia**; and *P. carinatum* should be called *Campylia carinata*.

This handsome plant is a native of the Cape of Good Hope, and is generally supposed to be difficult of cultivation; but it will grow and flower as freely as any of the tribe, if planted in an equal portion of loam, peat, and sand mixed together: the pots must be well drained with potsherds broken small, and care must be taken not to overwater it. Cuttings strike root freely, planted in pots in the same kind of soil, and placed in a sheltered situation.

* *Campylia*. Pet. 5 inæqualia: duo superiora majora: unguis margine inferiore auriculati. Stam. 5 sterilia: duo superiora longiora hamata recurva. *Lindley MSS.*





PELARGONIUM Lousadianum.

Miss Lousada's Stork's-bill.

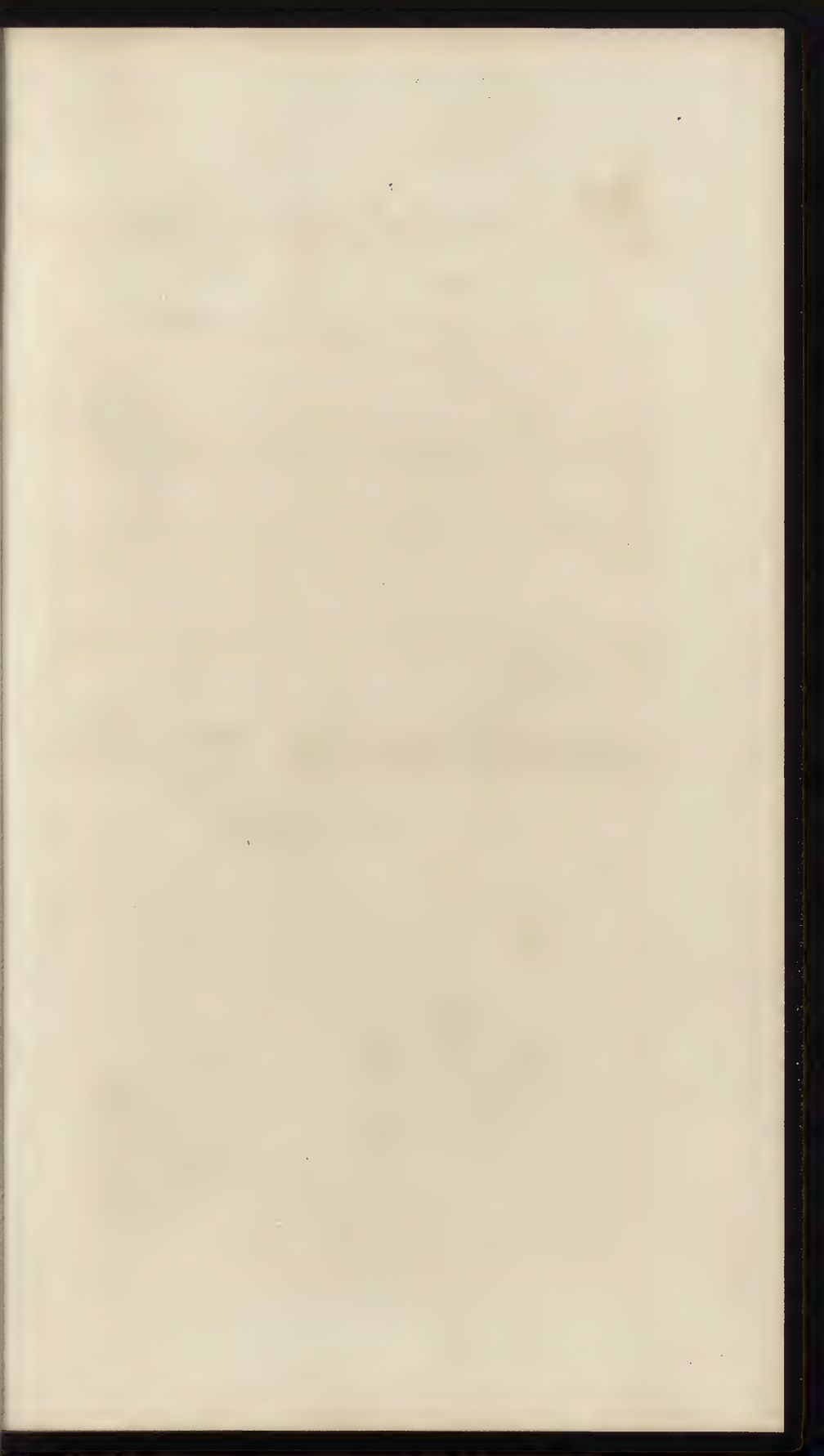
P. *Lousadianum*, pedunculis paucifloris, foliis inferioribus basi dilatatis cordatis trilobis; lobis sublobatis argute dentatis; superioribus basi cuneatis subtrilobis, calycibus reflexis, tubo nectarifero calyce duplo longiori.

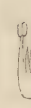
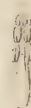
Stem shrubby, erect, branching. *Branches* clothed with short soft hairs. *Leaves* 3-lobed, much widened at the base: *lower ones* 2 inches long and $2\frac{1}{2}$ wide, cordate, 3-lobed, sharply but unequally toothed, thickly clothed on both sides with short soft hairs: *lobes* slightly lobed: *nerves* prominent on the lower side, and furrowed on the upper: *upper leaves* wedge-shaped at the base, 3-lobed, sharply toothed. *Petioles* flat and channelled on the upper side, and convex below, thickly clothed with short unequal hairs. *Stipules* cordate, acuminate, sometimes toothed, margins recurved. *Peduncles* few-flowered. *Involucre* of 5 or 6 ovate, keeled bractes, terminated in an acute point. *Pedicels* short, but unequal in length. *Calyx* 5-cleft, upper segment ovate, the others lanceolate, all reflexed when in flower, but erect when overblown. *Nectariferous tube* about twice the length of the calyx, flat and furrowed on both sides, thickly clothed with short hairs. *Petals* 5, the 2 upper ones roundly obovate, of a blush colour, with 2 confluent purple spots in the middle of each, which joins 2 slightly branched lines from the base, and between the two lines are other purple marks, of different shapes: lower petals broadly ligulate, of a blush colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured.

Germen and *aristæ* hairy. *Style* red, slightly hairy on the lower part, and smooth above. *Stigmas* 5, red, revolute.

This pretty plant has lately been raised from seed by Mr. Colvill. It is nearer of kin to *P. Seymouria* than to any other with which we are acquainted. We have named it in honour of Miss Lousada, a great encourager of Natural History, and of Botany in particular, and whose extensive herbarium of well-preserved specimens does her much credit. It is a hardy, free-growing kind, but seldom exceeds eighteen inches in height, and continues to flower in succession throughout the summer. A mixture of loam and peat, or decayed leaves, suit it very well; and a common greenhouse, or window of a warm room, is sufficient to protect it in winter, when it requires but little water. Cuttings strike root freely, planted in pots, and placed in a shady situation.

The drawing was taken at the nursery of Messrs. Colvill and Son, in September last.





Androsace

F. Muell.

PELARGONIUM ardens.

Glowing Stork's-bill.



P. ardens, caule crasso suffruticoso, scapo diviso villosa, foliis hirsutis cordato-oblongis lobatis ternatisque; lobis obtusis sinuatis dentatis, tubo nectarifero basi attenuato calyce triplo longiori.

Pelargonium ardens. *Hort. Sub. Lond.* p. 151. n. 47.
Loddiges. Bot. Cab. 139.

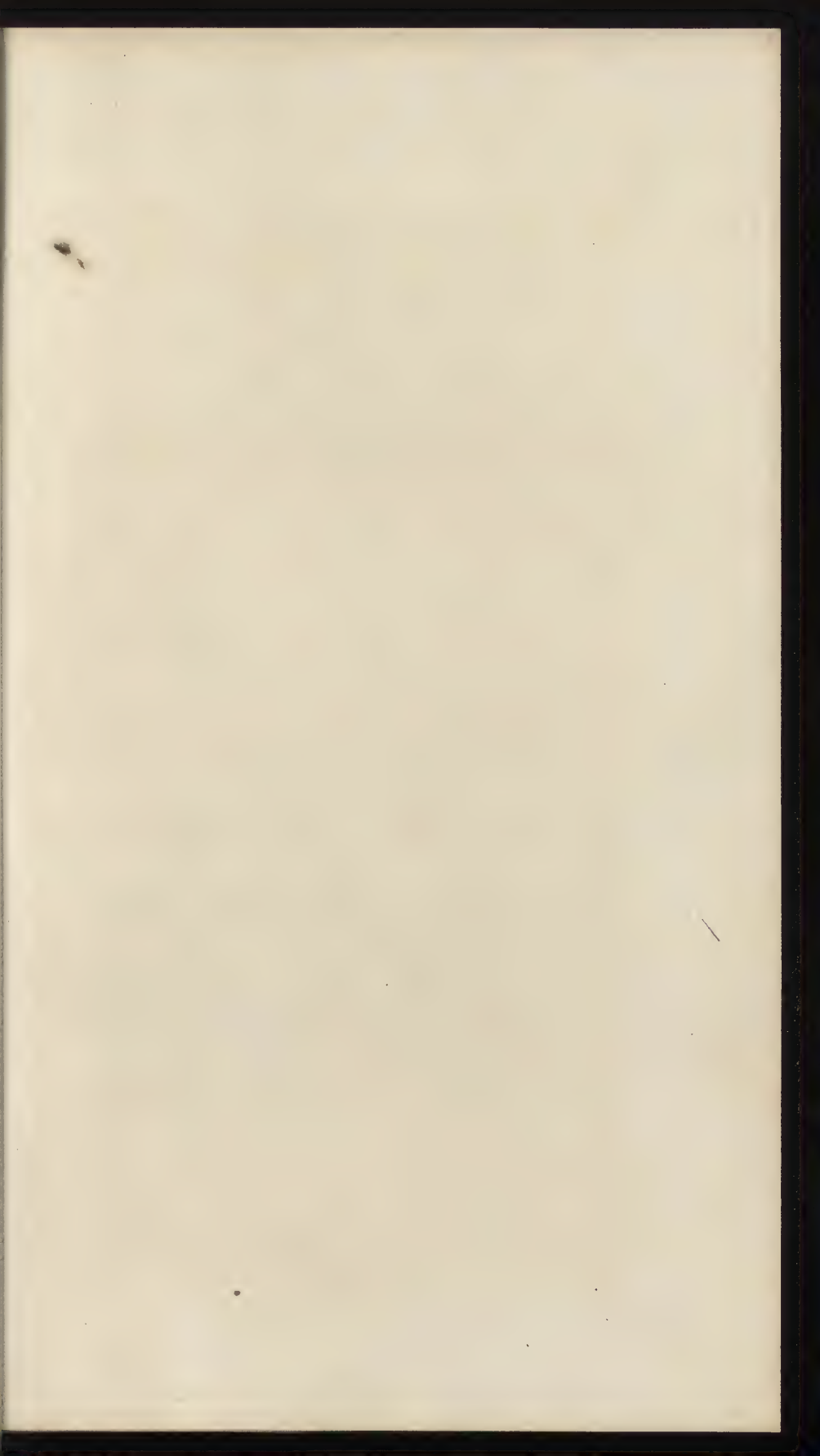
Geranium ardens. *Andrews's Ger. cum icone.*

Stem suffruticose, thick and uneven, a little branched. *Branches* short and succulent. *Leaves* scarcely 2 alike, hairy on both sides, cordate, oblong, unequally lobed, sometimes ternate; lobes obtuse, sinuate or unequally toothed with blunt-rounded teeth: *nerves* large and prominent, branching and very hairy. *Petioles* increasing in size towards the leaf, flattened and channelled above and rounded below, thickly covered with soft villous hairs. *Stipules* cordate, ciliate, widely dilated at the base, and ending abruptly in an acute point. *Scape* divided, villous, leafy at the base of the peduncles. *Umbels* many-flowered. *Peduncles* villous, cylindrical and swollen at the base. *Involucre* of several unequal bractes, joined into one at the base, some ovate, others lanceolate, concave, villous. *Pedicles* very short, about the length of the calyx. *Calyx* 5-cleft, segments unequal, carinate, ciliate, upper one ovate, erect, concave, the others lanceolate, reflexed. *Nectariferous tube* 3 or 4 times longer than the calyx, flattened and keeled on both sides, gradually attenuated downwards, and covered with short stiff hairs. *Petals* 5, two uppermost widest, ovate, obtuse, of a bright scarlet, shaded with a darker colour: *lower ones* oblong, obtuse, of the same colour. *Filaments* 10, erect, united at the base, 6 bearing perfect anthers, and 1 imperfect

on a flat filament. *Germen* hairy. *Aristas* villous. *Style* smooth, of a light red. *Stigmas* revolute.

In Mr. Loddiges' *Botanical Cabinet*, this plant is stated as being a native of the Cape of Good Hope, but we have lately been informed that it is a hybrid production, and was first raised in the nursery of Mr. Lee, at Hammersmith, from the seeds of *P. lobatum* impregnated by *P. fulgidum*; this we believe, since it is exactly intermediate between the two: in habit and character it corresponds with the section of the former, but the colour and form of the leaves is that of the latter. The parent plants belong to distinct sections, but *P. fulgidum* is an extreme species in the section of the true Pelargonium, and readily joins with *P. gibbosum*, which is intermediate between that and the section to which *P. lobatum* belongs. We find it very difficult to seed any plant of one section, impregnated by the pollen of another; but they will readily mix with any one belonging to the same section; and when we obtain a mule from two different sections, it will seldom produce seed, and if ever it does, the only way is to impregnate it with the pollen of one of its parents, for it seldom produces any pollen of itself, and if ever it does, that is generally imperfect. *P. Blandfordianum* (*Geranium Blandfordium* of Andrews) we believe to be another mule between different sections, perhaps between *P. graveolens* and *P. echinatum*, as it has the leaves of the former and flowers of the latter: we have never been able to detect the least vestige of pollen in its anthers, and the germen is so imperfect, that we have never been able to induce the appearances of incipient fecundity; which we have in several other kinds where the seed was after all abortive.

This handsome plant is a great acquisition to this extensive family, from the brilliancy of its flowers; another thing which makes it desirable, is its flowering in succession the greater part of the year. An equal mixture of turfy loam, peat, and sand, is the best soil for it; and cuttings root freely planted in pots and placed on a shelf in the greenhouse. Our drawing was taken at the nursery of Messrs. Colvill and Son in May last.





Asclepias tuberosa L. fr. v. *Asclepias tuberosa* L. fr. v.

Walt.

DIMACRIA pinnata.

Wing-leaved Dimacria.

Dimacria. Pet. 5 inæqualia, duo superiora conniventia apice divaricata. Stam. sepalis breviora; 5 fertilia duobus inferioribus duplo longioribus porrectis supremo brevissimo: 5 sterilia minima subæqualia. *Lindley MSS.*

D. pinnata, umbella composita, foliis pinnatis multi-jugis: foliolis oppositis ternis quaternisve rotundato-ovatis integerrimis utrinque hirsutis, petalis planis.

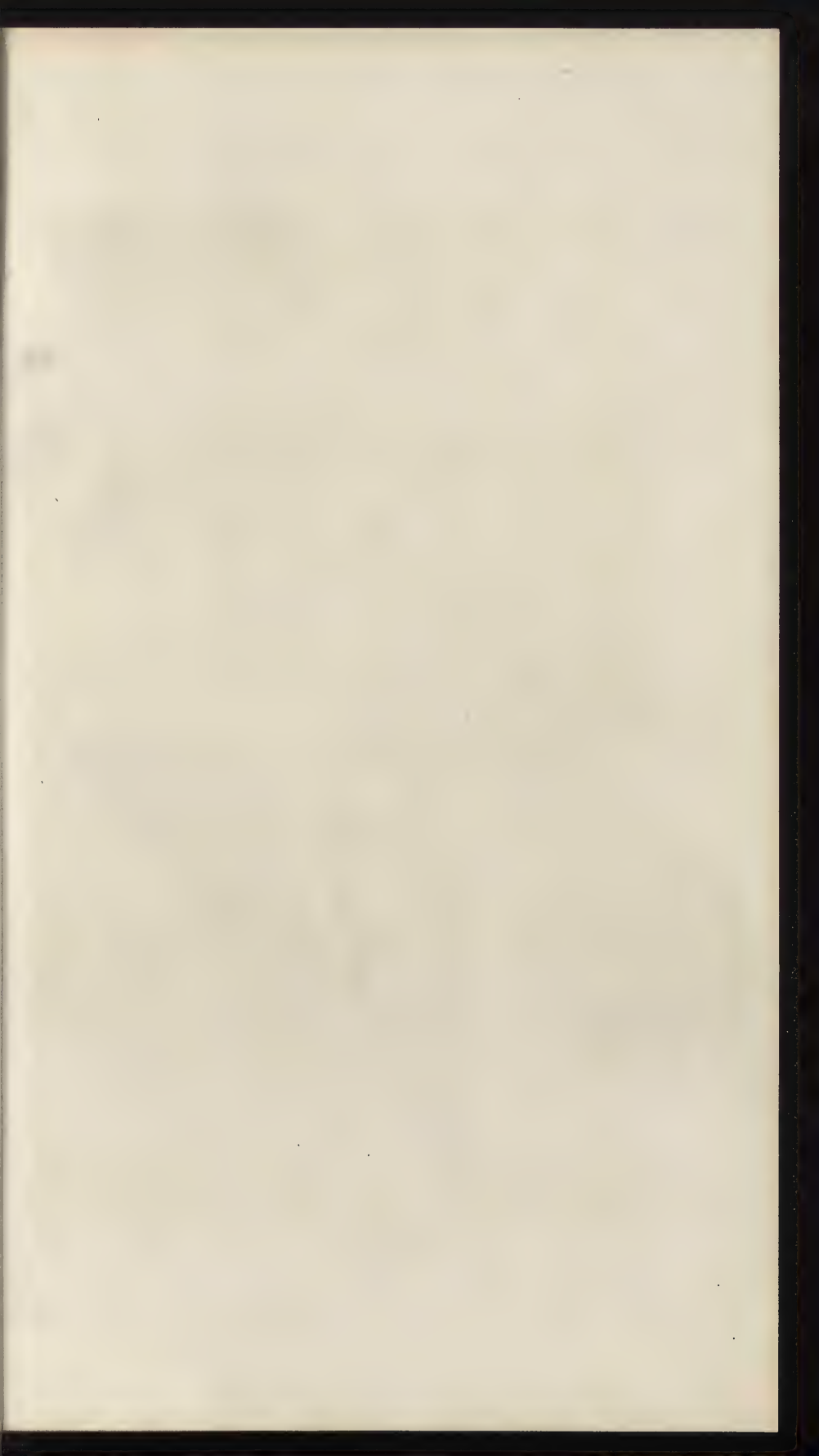
Pelargonium pinnatum. *Pers. syn.* 2. p. 227. *Hort. Kew. ed.* 2. v. 4. p. 163. *Botan. magaz.* 579. *L'Herit. ger. t.* 8.

Root tuberous. *Stem* none. *Leaves* in a cluster at the crown of the root, pinnate: *leaflets* widely and roundly ovate, entire, opposite, ternate or in fours, thickly clothed on both sides, with short white hairs, which gives them a hoary appearance. *Petioles* nearly cylindrical, thickly covered with close-pressed hairs. *Stipules* subulate, membranaceous, joined to the base of the petioles. *Scape* branching, leafy at the base of the peduncles. *Peduncles* cylindrical, densely clothed with hairs, some spreading, others close-pressed. *Involucre* of numerous subulately-linear fringed bractes. *Calyx* 5-cleft, segments lanceolate, concave, very hairy, the upper one erect, the others reflexed. *Nectariferous tube* sessile, slightly flattened, very hairy, more than twice the length of the calyx. *Petals* 5, the two uppermost widest, broadly spatulate, emarginate, reflexed, of a light flesh-colour, approaching to buff, from the bend to base marked with two rows of irregular-shaped

bright red spots, from 6 to 8 in number; *lower petals* narrowly spatulate of rather a lighter colour. *Filaments* 10, shorter than the calyx, connected at the base, 5 bearing anthers, of the fertile ones the 2 lowermost are much the longest, the 5 sterile ones very short and nearly equal. *Pollen* yellow. *Germen* villous. *Style* short, red and hairy on the lower part and smooth above. *Stigmas* 5, red and revolute.

Our drawing of this curious species was taken from a fine plant in the superb collection of Robert Jenkinson, Esq. where it continued to flower in succession all the summer, and till late in autumn; we had also a fine plant sent us in flower from the nursery of Mr. Tate, Sloane Street. The plants of this genus, as well as of *Hoarea**, require a particular kind of management to have them in perfection: their pots must be as small as possible and well drained with potsherds broken very small, as the young fibres are very fond of running amongst them. The best soil we find them succeed in is an equal portion of turfy loam, peat, and sand mixed together: when they are growing freely, or in flower, they require to be regularly watered, but when in a dormant state they must be kept quite dry till they show an inclination to grow afresh; they should then be potted in fresh mould, and the little tubers may be taken from the old root; if it is wanted to increase, these might be planted several in one pot, with their tops above the surface, and must be kept quite dry till the wound is beginning to heal over; they may then have a little water, and they will soon make young plants, when they should be planted singly in small pots; they will also produce plenty of seeds, if a little pollen be shaken on the stigma when in flower.

* *Hoarea*. Sepala omnia recurva. Pet. 5 inæqualia; 2 superiora parallela longe unguiculata medio abrupte reflexa (3 inferiora conniventia intermedio latiore stamina involvente). Stam. longe tubulosa petalorum inferiorum longitudine, 5 sterilia recta, 3 inferioribus quam fertilia brevioribus. *Lindley MSS.*





PELARGONIUM nervosum.

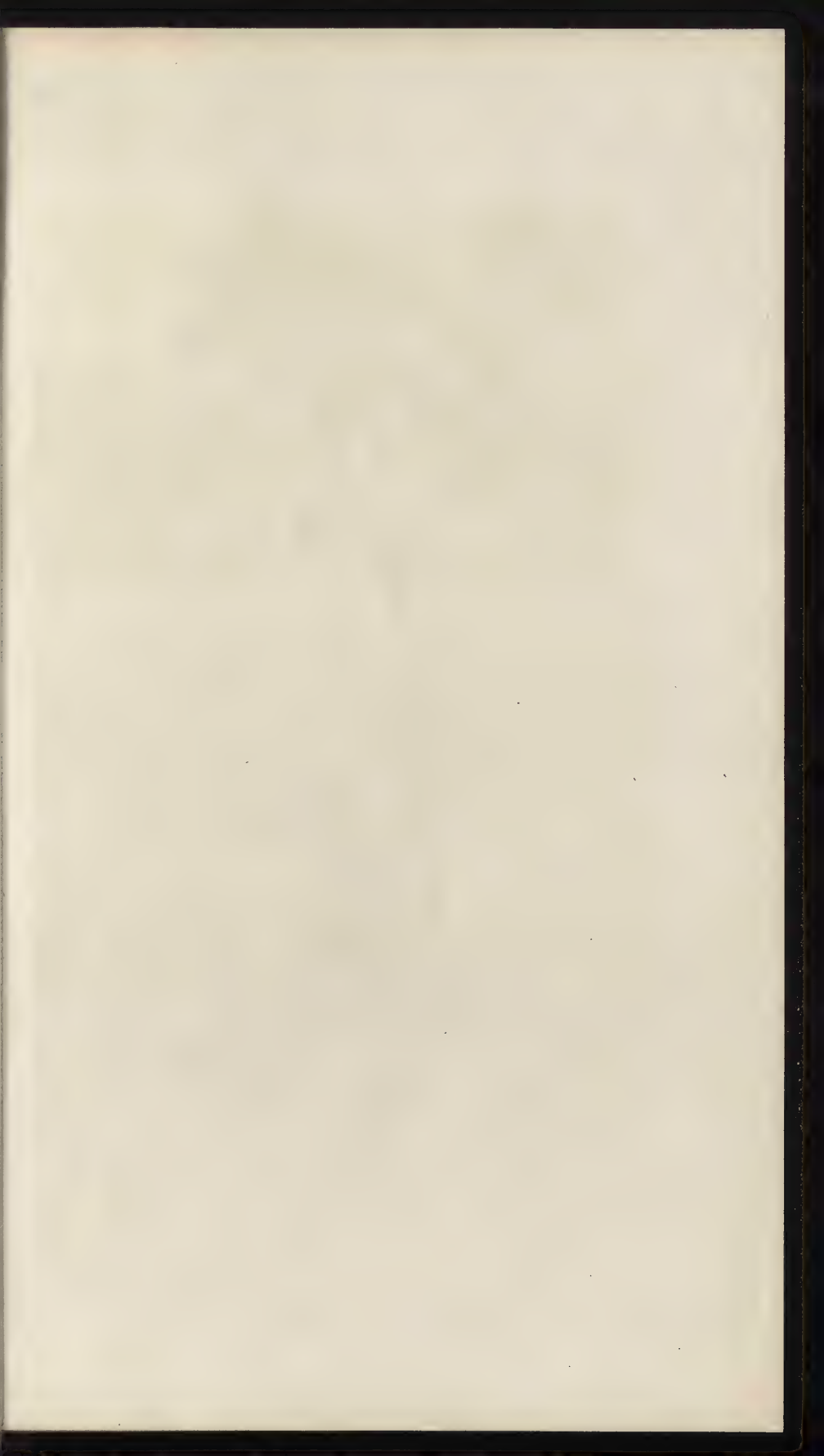
Prominent nerved Stork's-bill.

P. nervosum, umbellis plurifloris, foliis reniformibus leviter quinquelobis subcucullatis inæqualiter grossèque dentatis multinerviis, stipulis cordatis acuminate, petalis superioribus revolutis, tubo nectarifero longitudine calycis.

Stem shrubby, branching. *Branches* thickly covered with long soft unequal hairs. *Leaves* kidney-shaped, slightly 5-lobed, concave, deeply but unequally toothed with sharp rigid teeth, densely pubescent on both sides; *nerves* numerous, prominent, much branched. *Petioles* flattened and deeply furrowed on the upper side and convex below, widely dilated upwards, very hairy. *Stipules* cordate, acuminate, concave, ciliate. *Peduncles* several-flowered, thickly covered with soft villous hairs. *Involucre* generally of 6 bractes; *bractes* ovate or broadly lanceolate, acute, keeled, ciliate. *Pedicles* unequal in length, bent upwards. *Calyx* 5-cleft, segments erect, lanceolate, acuminate, villous. *Nectariferous tube* about the length of the calyx, widely flattened on both sides and gibbous at the base, thickly clothed with soft villous hairs. *Petals* 5, two uppermost widely ovate, apices reflexed or revolute, of a reddish rose-colour, darkest at the points; in the middle is a dark crimson spot, and numerous dark lines from it to the base, which branch in all directions; *lower petals* oblong, obtuse, of rather a lighter colour. *Filaments* 10, only 7 bearing anthers. *Pollen* orange-coloured. *Germen* densely villous. *Style* red, very hairy. *Stigmas* 5, revolute.

This fine plant is of hybrid origin, and was raised by Mr. Dennis from the seed of *P. princeps* (known in collections by the appellation of the *Princess Charlotte's Geranium*); it is almost impossible to guess at its other parent: it is a very desirable plant, as it continues to flower through the summer, and till late in autumn; it is also very hardy, only requiring a common greenhouse or warm room to protect it from the frost in winter. A mixture of turfy loam and peat, or decayed leaves, suits it very well; and cuttings will root freely in the same kind of soil, if placed in a sheltered situation.

Our drawing was made at the nursery of Mr. Dennis, in September last.





S. S. Smith, del.

St. John's Wort, L. 1020.

J. W. H. S.

PELARGONIUM reniforme.

Kidney-leaved Stork's-bill.

P. reniforme, umbellis paucifloris, foliis reniformibus crenato-dentatis subtus tomentosus, caule flexuoso subcarnoso, stipulis subulatis basi dilatatis persistentibus, tubo nectarifero subsessili triplo longiori calyce.

Pelargonium reniforme. *Botan. magaz.* 493. *Hort. Kew. ed. 2. v. 4. p. 171.* *Persoon's synops. 2. p. 229.*

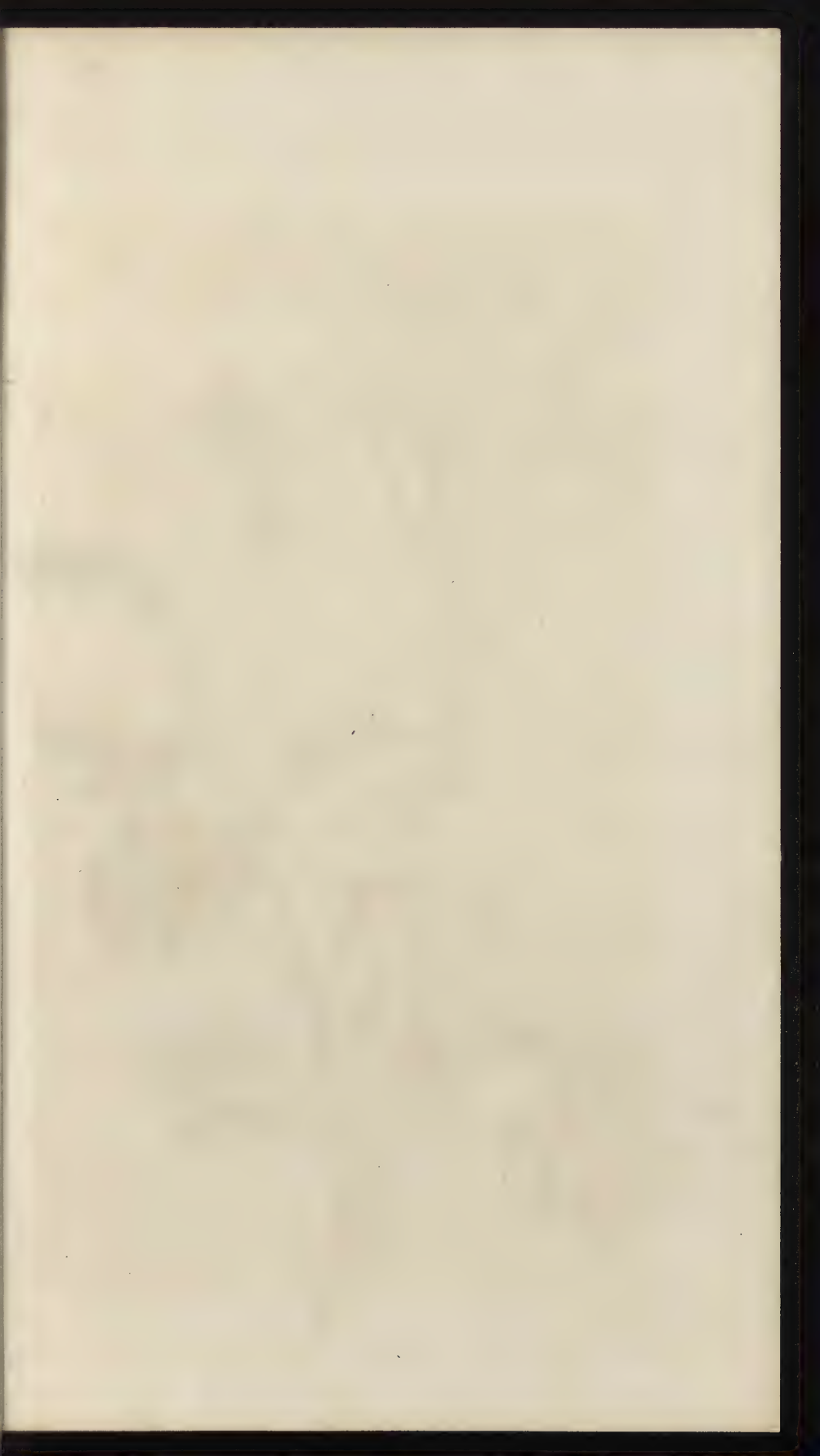
Geranium reniforme. *Andrews's reposit.* 108.

Stem shrubby. *Branches* rather succulent, of a brown colour, slightly downy, flexuose or bent betwixt each joint. *Leaves* small, of a round kidney shape, wider than long, unequally toothed with blunt rounded teeth, downy on the upper side and densely tomentose underneath. *Petioles* slender, unequal in length, flattened and furrowed on the upper side and convex below, thickly covered with short but unequal hairs. *Stipules* persistent, awl-shaped, but dilated at the base, at length hardening into a sort of spine. *Peduncles* generally 3 or 4 flowered, cylindrical, swollen at the base, and thickly covered with very short hairs. *Involucre* mostly of 6 bractes; *bractes* oblong, bluntish, downy, and ciliate. *Pedicles* very short, scarcely any. *Calyx* 5-cleft, segments lanceolate, obtuse, with membranaceous margins; upper segment erect, concave, the others smaller and reflexed, all covered with short hairs. *Nectariferous tube* flat on both sides, more than 3 times longer than the segments of the calyx, covered with short rigid hairs. *Petals* 5, obcordate, 2 uppermost widest, of a dark rose-colour, with a dark purple spot in the centre, and underneath it are 2 forked lines; *lower petals* narrower and rather paler. *Filaments* 10, united at the base, 6 only bearing anthers,

besides a broad spatula-shaped filament at the back, terminated with a sharp mucro (which we suspect is the case in all this section). *Pollen* yellow. *Germen* villous. *Style* flesh-coloured, short and smooth. *Stigmas* 5, red, spreading.

This pretty species belongs to a very distinct section, the same to which *P. cortusæfolium*, No. 14, belongs; to it also belong *P. echinatum*, *P. armatum* (*Geranium echinatum, rubrum* of Andrews), *P. crassicaule* of L'Heritier, *P. crassicaule* of Botanical Magazine, and two handsome mules, *P. sæpeflorens*, intermediate between the present species and *P. echinatum* or *P. armatum*, and *P. intermedium*, exactly intermediate between the present and *P. cortusæfolium*; these are the only mules we have yet observed in flower belonging to this section, but Mr. Colvill has this year raised a curious seedling from *P. intermedium*, that we believe was impregnated with *P. fulgidum*, which belongs to a different section: they are about as distinct from each other as *P. fulgidum* and *P. lobatum*, at a different point of the section. *P. lobatum* is also nearly related to this section, in only bearing 6 perfect anthers, and a wide spatulate filament as an attempt at a seventh: we have never met with as few as 5, as stated in Botanical Magazine to be always the number they had met with. The plants of this section are rather of a succulent nature, but have an amazingly hard shining bark; their roots are also tuberous, approaching to the section of *P. lobatum*, &c. *P. gibbosum* stands intermediate between the three sections, and would without doubt mix with any of them.

This plant inclining to be succulent, though less than any of its kin, care must be taken not to overwater it when not growing freely. The best soil for it is an equal mixture of very sandy loam and peat; the pots must be well drained, that the wet may pass readily off. Cuttings root freely planted in pots in the same kind of soil, and set on a shelf in the greenhouse. The best time for planting these is in autumn, as the plants are then growing most. Our drawing was taken at the nursery of Messrs. Colvill and Son in August last.





Primula sp.

Collected by J. R. Gregory 170 Breckinridge Jan. 1, 1821.

J. M. Smith

PELARGONIUM particeps.

Participant Stork's-bill.

P. particeps, umbellis multifloris, foliis cordato-reniformibus leviter quinquelobis undulatis inæqualiter obtuse dentatis subtus tomentosis, stipulis lanceolato-subulatis persistentibus, caule erecto carnosio, tubo nectarifero calyce triplo longiori.

Geranium cortusæfolium, var. *cortusoides*. *Andrews's geran. c. ic.*

Stem shrubby, erect, branching, of a brown colour. *Branches* erect, or scarcely flexuose, succulent, slightly pubescent, with a shining bark. *Leaves* cordate or kidney-shaped, slightly 5-lobed, undulate, very unequally toothed with very blunt rounded teeth, hairy, but shining on the upper side, and tomentose underneath. *Petioles* nearly cylindrical, swollen at the base, and thickly covered with soft white unequal hairs. *Stipules* persistent, lanceolate, ending in an awl-shaped point, of a light brown colour. *Peduncles* cylindrical, thick, very hairy and many-flowered. *Involucre* of several bractes; *bractes* lanceolate, acute, concave, keeled, very hairy. *Pedicles* very short. *Calyx* 5-cleft, segments lanceolate, obtuse, thickly covered with long soft hairs, upper segment erect, concave, keeled, the others flat and reflexed. *Nectariferous tube* flat, slightly furrowed on both sides, very hairy. *Petals* 5, obcordate, 2 upper ones widest, of a dark rose-colour, with 2 dark purple spots at the base of each, lower petals of the same colour, all faintly stained with spots and marks of a deeper colour. *Filaments* 10, united at the base, 6 only bearing anthers; at the back is a large flattened

filament terminated with a little mucro, nearly the same as in *P. reniforme*, *P. cortusæfolium*, and perhaps the whole of this section. *Pollen* yellow. *Capsules* very hairy. *Aristæ* villous. *Style* smooth, flesh-coloured. *Stigmas* 5, dark red, reflexed.

This curious plant is one of the mules which we noticed in our last number; it was first raised by Mr. Colvill, from seed produced between *reniforme* and *cortusæfolium*, and participates equally of the two, except in being a taller grower than either. It is a very desirable plant, as it continues to flower till late in autumn, after most of the showy kinds are over; it also flowers before them in spring, if kept tolerably warm and dry in the winter. The best soil to grow it is an equal portion of loam, peat, and sand; the pots must also be well drained, as nothing is so pernicious to it as too much wet. Cuttings root freely planted in the same kind of soil and set on a shelf in the greenhouse; the best time for planting these is late in summer, as the plants are then beginning to grow.

Our drawing was taken at the nursery of Messrs. Colvill and Son in September last.





PELARGONIUM Boyleæ.

The Countess of Cork's Stork's-bill.

P. *Boyleæ*, pedunculis 3-4 florisve, foliis distichis basi cuneatis leviter quinquelobis acutis argute dentatis pubescentibus; superioribus rhomboideis, stipulis lanceolatis acuminatis, calycibus reflexis, tubo nectarifero calyce breviori.

Pelargonium Boyleæ. *Hoare MSS.*

Stem shrubby, very much branching. *Branches* slender, spreading, thickly clothed with unequal hairs. *Leaves* distichous, cuneate or truncate at the base, slightly 5-lobed, sharply but unequally toothed, and ending in a sharp point; margins undulate, clothed on both sides with soft downy hairs; upper leaves, which accompany the flowers, rhomboid. *Petioles* nearly cylindrical, or slightly flattened on the upper side, very hairy. *Stipules* lanceolate, taper-pointed, keeled, sometimes toothed, but generally entire. *Peduncles* 3-4-flowered, thickly clothed with long unequal hairs. *Involucre* of 5 or 6 bractes; *bractes* lanceolate, acuminate, keeled. *Pedicles* unequal in length, hairy. *Calyx* 5-cleft, upper segment erect, widely lanceolate, the others reflexed and narrower, all keeled and taper-pointed. *Nectariferous tube* a little shorter than the calyx, widely flattened on both sides, hairy. *Petals* 5, the 2 uppermost oblong, undulate, oblique at the base, white, with a dark purple oblong spot in the centre, and beneath it branch several purple stripes, tinged with red at the outsides; *lower petals* narrowly spatulate, obtuse, white, with undulate margins. *Filaments*

10, united at the base, 7 only bearing anthers. *Pollen* of a light orange-colour. *Style* purple, all over hairy. *Stigmas* 5, purple and revolute.

Our drawing was taken from a fine plant sent us by Sir R. C. Hoare, named in compliment to the Countess of Cork, who raised it from seed; we should think it was a hybrid production, and, from its habit and character, intermediate between *P. superbum* and one of the Citron-scented kinds, perhaps *P. hermanniæfolium*, or one of its kin, as the size and shape of the leaves are those of the former, and their distichous mode of growth, of the latter; the size and shape of the flowers participate of the two. It is a fine free-growing plant, and an abundant flowerer, beginning to flower early in spring, and continuing a succession all the summer; it is also a hardy kind, requiring only a common greenhouse or warm room to protect it in winter; a mixture of turfy loam and peat, or any light vegetable mould, suits it very well; and young cuttings root readily, if planted in pots in the same soil and placed in a sheltered situation.





C. D. Smith, del.

Pub. by S. Hodge, 170 Broadway, Jan. 1, 1821.

J. Mott.

PELARGONIUM lobatum.

Cow Parsnep-leaved Stork's-bill.

P. lobatum, acaule, umbellis compositis, foliis subtus tomentosis simplicibus cordatis ternatis quinatisve lobatis sinuatis inæqualiter dentatis, calycibus reflexis, tubo nectarifero subsessili calyce quintuplo longiori.

Pelargonium lobatum. Willd. *sp. pl.* 3. p. 650. Pers. *syn.* 2. p. 228. Hort. Kew. ed. 2. v. 4. p. 165. Bot. mag. 1986.

Geranium lobatum. Cav. *diss.* 4. p. 250. t. 114. f. 2.

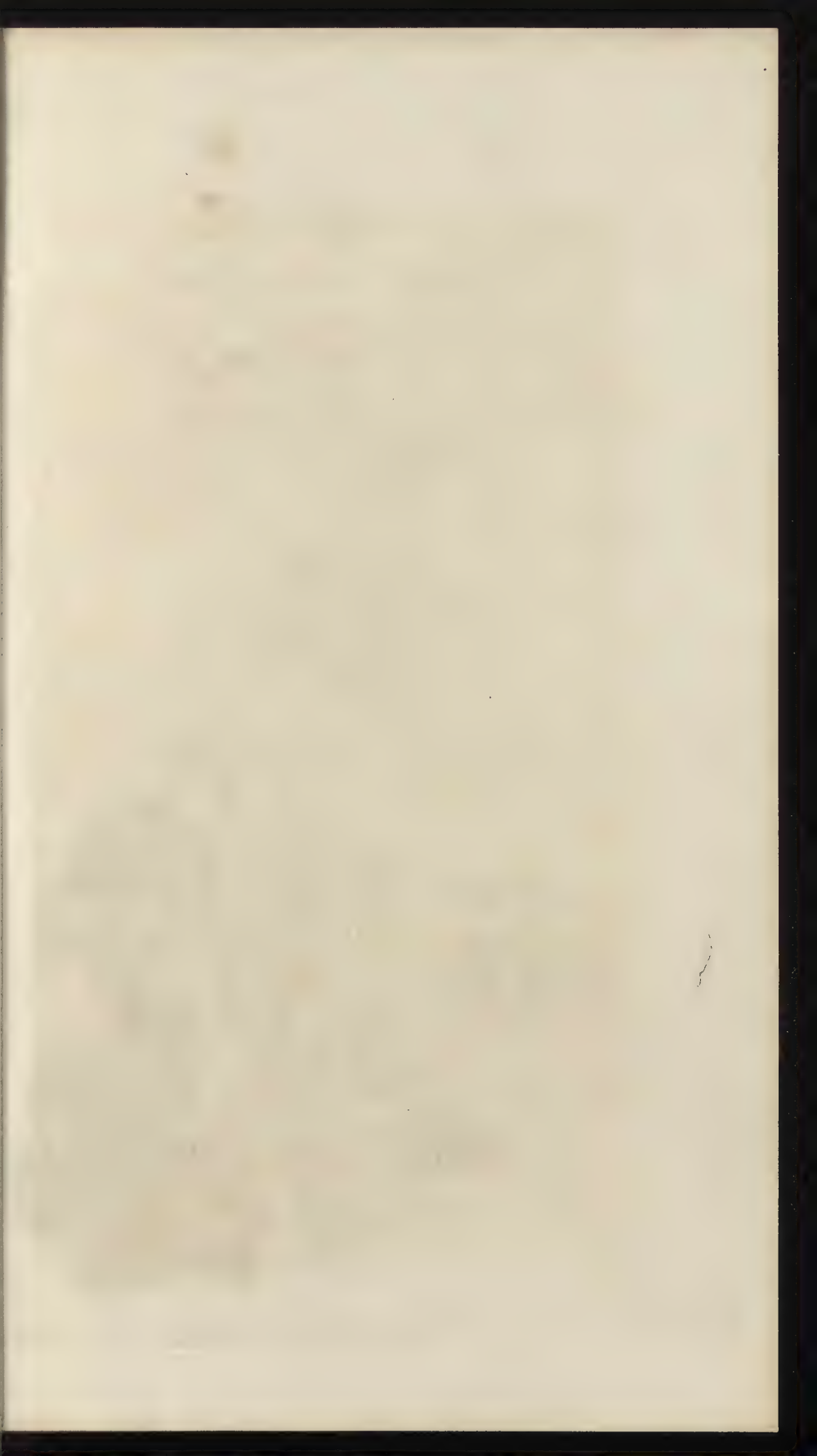
Geranium africanum noctu olens tuberosum vitis foliis hirsutis. Commel. Hort. 2. p. 123. t. 62.

Root tuberous, very large, rough and uneven, and clothed with a hard brown imbricated scaly bark; branching below into numerous smaller tubers of various shapes and sizes. *Stem* none, but from the crown of the tuber and sometimes from the sides proceed the leaves and divided scapes. *Leaves* very large and of various forms, some being simple and cordate, others lobed or sinuate, ternate or sometimes quinate, deeply and very unequally toothed, green and very hairy on the upper side, white and densely tomentose on the lower surface; *nerves* very large, branched and thickly clothed with soft hairs unequal in length. *Petioles* nearly cylindrical, swollen at the base and apex, thickly clothed with soft hairs. *Stipules* large, cordate, acuminate, generally toothed. *Scapes* divided, and branching in different directions; *bractes* on the lower parts of the scape widely cordate, ending abruptly in an acute point, very downy and ciliate. *Peduncles* flat and slightly furrowed on one side, nearly semicylindrical, many-flowered, and clothed with long soft hairs. *Flowers* very fragrant at night, but without scent during the day. *Involucre* of many bractes, joined into 3 or 4 sets at the

base; *bractes* lanceolate, acute, concave, fringed. *Pedicels* very short, scarcely any. *Calyx* 5-cleft, segments unequal, lanceolate or linear, acute, concave, all reflexed. *Nectariferous tube* about 5 times longer than the calyx, furrowed on both sides, thickly covered with short hairs. *Petals* 5, or sometimes increased to 7 or 8, all obovate, nearly black, with a yellowish base and margin. *Filaments* 10, united at the base, 6 bearing perfect anthers, besides a spatula-shaped stamen-like organ, which may be considered an attempt at a seventh; in the *many-petalled flowers* the anthers are increased to 9 or 10, and the spatula-shaped organ remains the same. *Pollen* yellow. *Germen* and *aristæ* villous. *Style* short, smooth, pale flesh-colour. *Stigmas* 5, of the same colour, revolute.

For an opportunity of giving a drawing of this fine species, we are obliged to Mr. Tate, nurseryman, of Sloane Street, who sent us a plant in full bloom, that had been recently imported from the Cape; it belongs to the same section of the genus as *P. pulchellum* and *P. ardens*, already figured in this work; and besides the others that we have enumerated, Mr. Colvill has lately received several very curious species from the Cape, which we have no doubt will also belong to this section.

We have often seen plants of this species in collections, but have seldom observed it in flower, which is probably owing to the mode of treatment. When the plants are in a dormant state, they require scarcely any water, till they show an inclination to grow; they should then be fresh potted in an equal mixture of turfy loam, peat, and sand, with the pots well drained; they must then be regularly supplied with water; as they grow they may be shifted into larger sized pots, if required, and they will flower as freely as any other kind: the best method of propagating them is by the little tubers of the roots, which may be planted several in one pot, in the same kind of soil; their tops must be just above the surface of the mould, and they require scarcely any water till the wound is calloused over, when they may be watered regularly, and they will soon make young plants.





PELARGONIUM pinguifolium.

Greasy-leaved Stork's-bill.

P. pinguifolium, umbellis multifloris, foliis reniformi-cordatis leviter quinquelobis subcrenatis carnosis; lobis obtusis muticis, ramis carnosis diffusis subangulatis.

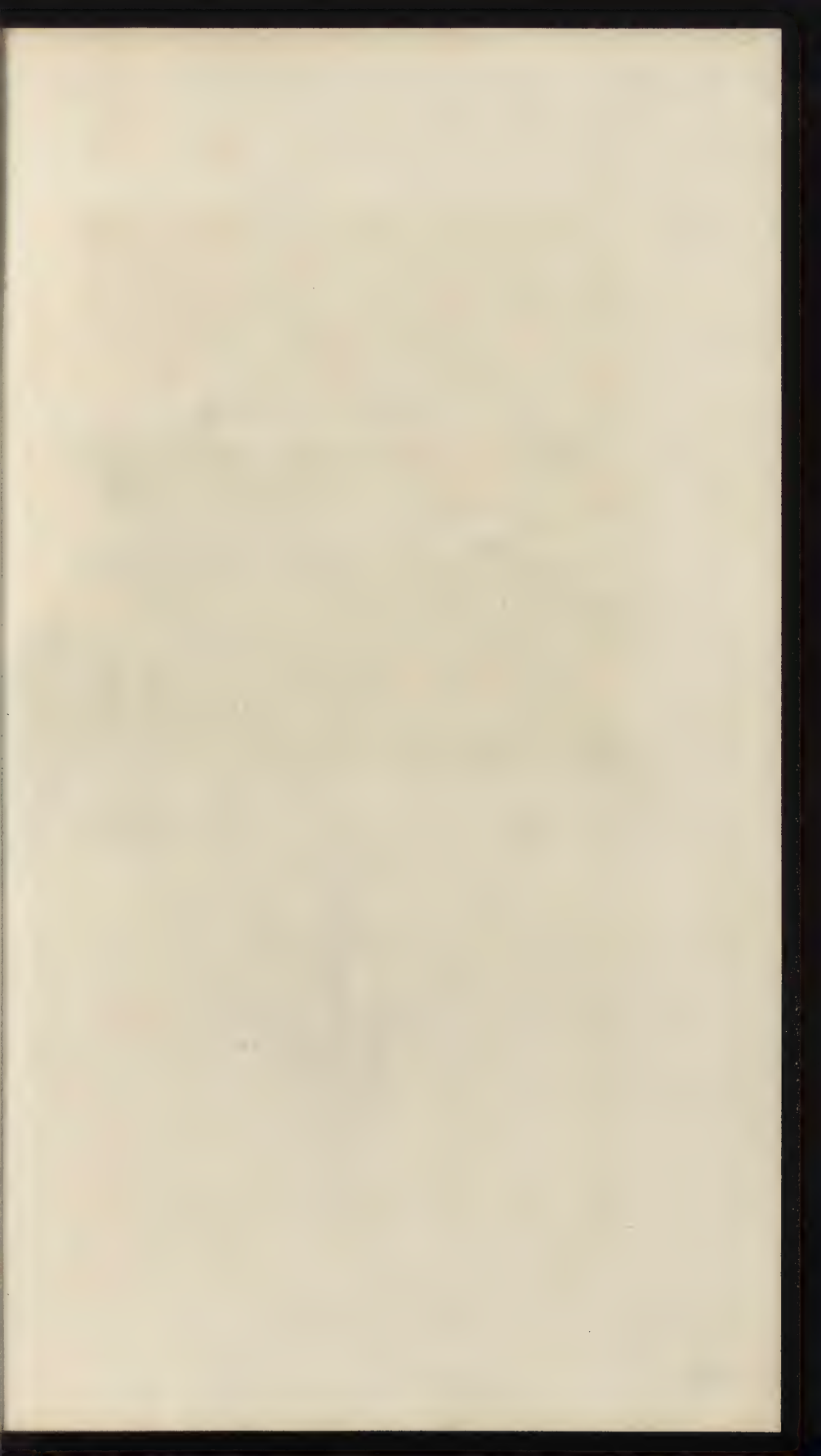
Geranium hederinum, flore albo. *Andrews's ger. c. ic.*

Stem shrubby, much branched. *Branches* succulent, spreading in various directions, slightly angular, thickly clothed with leaves, downy. *Leaves* between kidney and heart shaped, slightly 5-lobed, entire or sometimes shallowly notched, a little undulate, of a fleshy substance and a yellowish greasy appearance, slightly pubescent. *Petioles* flattened and channelled on the upper side and convex below, clothed with short down. *Stipules* cordate, acute, margins slightly recurved. *Peduncles* cylindrical, pubescent, bearing umbels of many flowers. *Involucre* of about 6 bractes, some cordate, others lanceolate, acute. *Pedicles* very short, scarcely any. *Calyx* 5-cleft, upper segment erect, concave, slightly keeled, the others narrower, lanceolate, acute, spreading. *Nectariferous tube* about twice the length of the calyx, much flattened and keeled on both sides. *Petals* 5, broadly wedge-shaped, nearly equal in size, of a blush-colour, 2 upper ones marked with a pale red spot in the centre, which joins 2 lines that come from the base, and are slightly branched. *Filaments* 10, united at the base, 7 only bearing anthers, and these are generally imperfect. *Germen* villous. *Style* white, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, red, reflexed.

This pretty plant belongs to a different section from any we have yet published; the division to which it pertains is intermediate between the tribe to which *P. zonale*, &c. belong, and the true *Pelargonia*; this division takes in *P. peltatum*, *P. lateripes*, and a new species raised last year from Cape seeds by Mr. Colvill, which has also been raised at the Botanic Garden at Berlin, as we are informed by Mr. Otto.

We are not certain whether this plant is a real species or a hybrid production; if the latter, it has been produced between *peltatum* and the red variety of *lateripes*.

Our drawing was taken from a plant communicated by Robert H. Jenkinson, Esq.: it is rather more tender than its congeners, the leaves being very apt to turn yellow, if it happens to receive too much wet: it thrives well in an equal mixture of turfy loam and peat, and the pots should be well drained, that the wet may pass readily off. Cuttings soon strike root, planted in pots and set on a shelf in the greenhouse.





Smith del.

Lab. by J. Mayr 176. Executed Feb. 1, 1821.

S. Muhl.

PELARGONIUM opulifolium.

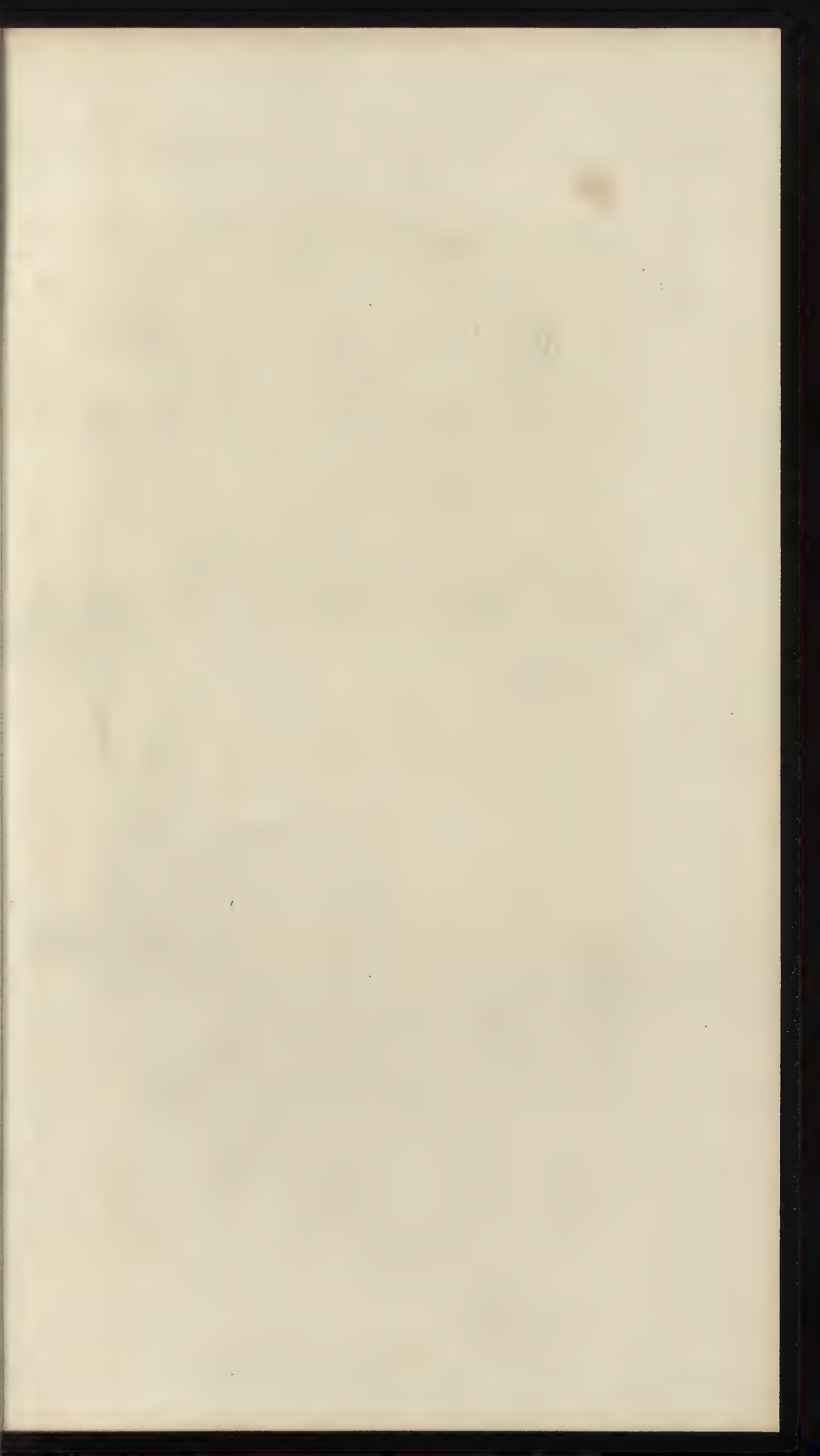
Guelder-rose-leaved Stork's-bill.

P. opulifolium, pedunculis subquadrifloris, foliis cordatis cucullatis quinquelobis inæqualiter dentatis glabris, stipulis cordatis acuminatis, caule glabro, tubo nectarifero calyce parum longiori.

Stem shrubby, erect, with few branches, of a shining brown colour. *Branches* glossy, green, thickly covered with unequal hairs. *Leaves* wider than long, cordate, concave, 5-lobed, unequally toothed, smooth and green, not glaucous, slightly hairy. *Petioles* long and slender, slightly flattened on the upper side and convex below, thickly clothed with straight unequal hairs. *Stipules* large, broadly cordate, acuminate, keeled, entire. *Peduncles* cylindrical, generally 4-flowered. *Involucre* of 6 bractes, often joined at the base; *bractes* ovate, keeled and taper-pointed. *Pedicles* bending upwards, very hairy. *Calyx* 5-cleft, upper segment erect, broadly lanceolate, 3-nerved, the others spreading or slightly reflexed, very unequal, lanceolate, acuminate, all of a dark brown colour. *Nectariferous tube* a little bent, flat and channelled on both sides and gibbous at the base, of the same colour as the calyx. *Petals* 5, the 2 uppermost very broad, nearly orbicular, and oblique at the base, of a pale rose-colour, with a white mark near the base, and from it branch short purple and faint red lines, lower petals narrowly oval, of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Aristæ* spiral, very hairy and bearded inwards. *Style* red, hairy below and smooth on the upper part. *Stigmas* 5, red, reflexed.

We suspect this to be a hybrid production; but cannot trace the parents with any certainty; it is in some degree related to *P. grandiflorum*, but there are several other hybrid kinds to which it is nearer akin; the form and colour of the flowers are very different, and the leaves are of a bright green colour, instead of being glaucous: it seems to be nearer to *P. amplissimum* of Willdenow's Enumeratio, than to any other we have seen described.

Our drawing was taken from a fine sample in the collection of Robert H. Jenkinson, Esq. where it flowered in succession all the summer: it is a free-growing plant, and thrives in a mixture of turfy loam and peat, or decayed leaves. Cuttings root freely, planted in pots in the same kind of soil in a sheltered situation.





PELARGONIUM echinatum.

Prickly-stalked Stork's-bill.

P. echinatum, umbellis multifloris paniculatis, foliis cordatis leviter quinquelobis crenatis subtus tomentosis, caule crasso carnosso, stipulis subulatis persistentibus spinescentibus hamato-recurvis.

Pelargonium echinatum. Willden. *sp. pl.* 3. p. 675. *Botan. magaz.* 309. *Pers. syn.* 2. p. 232. *Hort. Kew. ed.* 2. v. 4. p. 176.

Pelargonium hamatum. Jacq. *hort. schœnb.* 2. p. 7. t. 138.

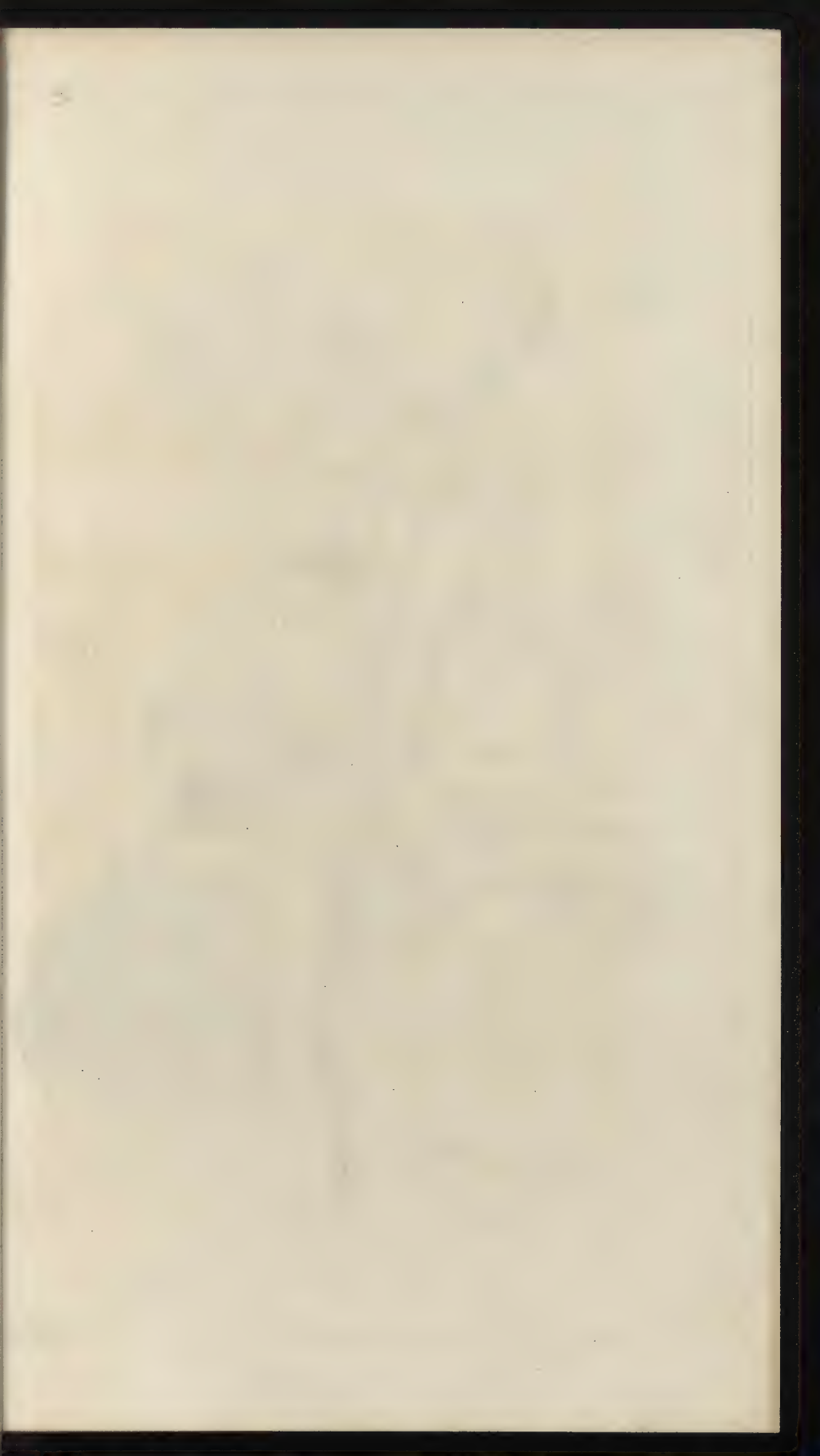
Geranium echinatum. Andrews's *geran. n.* 2.

Root fleshy, producing tubers at various distances. *Stem* shrubby, succulent, of a shining brown colour, covered all over with persistent recurved spiny stipules. *Branches* of a shining green, slightly pubescent. *Leaves* cordate, from 3 to 5-lobed, crenate, green and pubescent on the upper side, and densely tomentose underneath, 3-nerved at the base, which afterwards branch in all directions. *Petiole* slightly flattened on the upper side and rounded on the lower, thickly covered with very short recurved hairs. *Stipules* subulate, widened at the base, remaining persistent, and hardening into a kind of spine, with hooked or recurved points. *Peduncles* panicled, very long, cylindrical, thickened at the base, thickly clothed with short reflexed hairs, and bearing numerous many-flowered umbels. *Involucre* of many bractes; *bractes* oblong or lanceolate, taper-pointed, hairy and ciliate. *Calyx* 5-cleft, upper segment erect, lanceolate, concave, obtuse, and bearded at the point, the others

linear or lanceolate, and revolute. *Nectariferous tube* long and slender, slightly flattened on each side, more than four times the length of the calyx. *Petals* 5, narrowly obovate retuse, of a clear white, the 2 uppermost largest, with a bright red spot in the centre of each, and on each side below it is a dark red line, lightest at the outsides. *Filaments* 10, united at the base, 6 only bearing anthers, at the back is a broad obtuse spatula-shaped sterile filament, lengthened out as long as the fertile ones. *Pollen* yellow. *Germen* villous. *Style* flesh-coloured, quite smooth. *Stigmas* 5, bright red, reflexed.

This handsome species is one of the most desirable plants of the genus for any collection, as it begins to flower in autumn, after most of the other kinds have done, and if kept in a warm situation, it will continue to bloom till late in the spring. As soon as it has done flowering and becomes dormant, it should be watered very sparingly, requiring very little till it begins to grow again; it may then be shifted, and the greater part of the mould taken from its roots; then planted in a fresh pot in an equal mixture of loam, peat, and sand, and regularly watered; and as it increases in size, requires changing into larger pots, for this is the only way to flower it (or any of the section to which it belongs) in perfection. A warm part of the greenhouse, or the coolest and most airy part of the hot-house, is most suitable for it in winter. Cuttings root readily if planted when in a growing state, and set in the greenhouse.

Our drawing was taken at the nursery of Messrs. Colvill and Son in October last.





PELARGONIUM ignescens β . *sterile*.

Barren anthered flame-flowered Stork's-bill.

P. ignescens, vide *suprà* fol. 2.

β . *sterile*, antheris sterilibus, floribus 2-3plo minoribus, tubo nectarifero calyce sesquialongiori. *Nobis suprà* fol. 2.

Pelargonium ignescens. *Lod. bot. cab. n. 109.*

Pelargonium splendens. *Willden. hort. berol. 2. t. 76. enum. vol. 2. p. 711; monente Dom. Otto.*

Geranium ignescens. *Andrews's ger. c. ic.*

Stem shrubby, much branched. *Branches* slenderer than in the other variety, densely villous. *Leaves* smaller, trifid or deeply 3-lobed: side segments deeply 2-lobed, intermediate one 3-lobed, all unequally cut and toothed, very downy. *Petioles* unequal in length, slenderer than in the other variety, flattened and deeply channelled on the upper side, thickly clothed with unequal hairs. *Stipules* cordate, ciliate, often toothed. *Involucre* generally of 6 lanceolately-ovate bractes. *Pedicles* about the length of the calyx. *Calyx* 5-cleft, the upper segment much the largest, ovate, the others lanceolate, all thickly covered with soft hairs. *Nectariferous tube* flattened and channelled on both sides, about half as long again as the calyx. *Petals* 5, smaller than in the other variety, and less marked with black. *Filaments* 10, united at the base, 7 bearing anthers, and these are always destitute of pollen. *Style* red, slightly hairy. *Stigmas* 5, revolute.

We have published the fertile-anthered variety of this species in the second article of this work; where we have spoken of the present plant as distinct from *P. splendens* of Willdenow, the flowers being described by that writer as pentandrous, while in our plant they are constantly heptandrous, and the anthers without pollen; but we are assured by Mr. Otto, the curator of the Berlin Garden, that they are certainly the same. We have retained the name of *ignescens*, which was first given by Sir R. C. Hoare, who raised it from seeds, and it has also been published by that title in two of the works referred to. It is very probable that Willdenow's plant was derived from English gardens, though said to be native of the Cape of Good Hope. The plant in this country is without doubt a hybrid production, having been raised from the seed of *P. fulgidum*, for an account of which see *P. scintillans*, No. 28.

A very desirable plant on account of the brilliant colour of the flowers, which are produced nearly all through the year. It thrives in an equal mixture of sandy loam and peat, or any other light soil; and cuttings soon strike root if planted in pots in a sheltered part of the greenhouse. Our drawing was taken at the nursery of Messrs. Colvill and Son, King's Road, Chelsea.





L. & D. Smith. del.

Printed by J. R. Kitching 170 Piccadilly Feb. 1. 1821.

J. Watts. sc.

PELARGONIUM inodorum.

Scentless Stork's-bill.

P. inodorum, umbellis multifloris capitatis, foliis cordato-ovatis cuneatisque obsolete lobatis obtuse dentatis ciliatis, caule herbaceo; ramis diffusis teretibus, tubo nectarifero calyce triplo breviori.

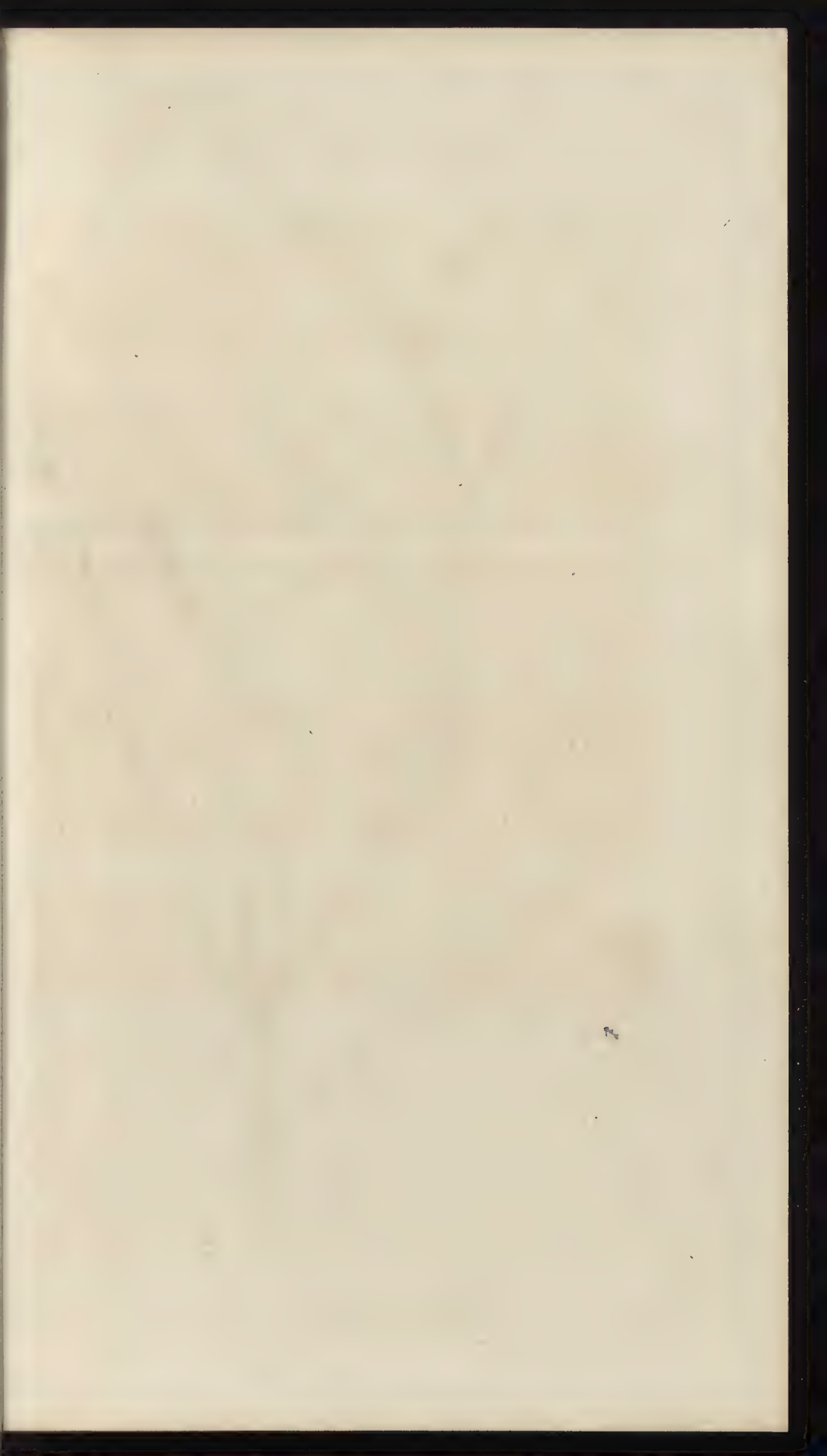
Pelargonium inodorum. *Willden. hort. berol.* 1. t. 34. *enum.* 2. p. 702. *Pers. syn.* 2. p. 229. *Hort. sub. lond.* p. 151. n. 59.

Stem herbaceous, very much branched and spreading in all directions. *Branches* simple or a little branching, cylindrical, generally erect, of a brown colour, thickly clothed with soft villous hairs. *Leaves* small, generally opposite, rather wider than long, cordate or cuneate, ovate, slightly lobed, bluntly and unequally toothed, ciliate, thickly clothed on both sides with short villous hairs; *nerves* branched and prominent below, and furrowed above. *Petioles* flattened and slightly furrowed on the upper side and rounded below, dilated at the apex, very hairy. *Stipules* membranaceous, lanceolate, acute, often joined to each other at the base, villous. *Peduncles* axillary, cylindrical, reaching far beyond the leaves, thickly clothed with soft hairs. *Umbels* many-flowered, in a close head. *Involucre* of many bractes; *bractes* unequal, narrowly lanceolate, acute, membranaceous, very hairy. *Pedicles* slender, very hairy, not so long as the calyx, but longer than the bractes. *Calyx* 5-cleft, segments reflexed when in flower, upper and lower ones lanceolate, side ones linear or subulate, all very hairy. *Nectariferous tube* very short, about 3 times shorter

than the calyx, a little flattened on each side. *Petals* 5, varying in colour on different plants, some nearly white or pale blush, others rose-coloured or light purple, upper petals broadly spatulate, subemarginate, with a dark spot in the centre, and lines branching in various directions, lower petals ligulate, with a stripe down the middle of each. *Filaments* 10, connected at the base, 7 spreading round the flower and bearing anthers. *Pollen* orange-coloured. *Seeds* blackish. *Capsules* brown, hairy. *Aristæ* spiral, bearded inwards with long white hairs. *Style* smooth, pale red, shorter than the filaments. *Stigmas* 5, red, reflexed.

Our drawing of this curious little species was taken at the nursery of Messrs. Colvill and Son, who raised it from seeds received from New South Wales. Willdenow, in the *Hortus Berolinensis*, states it to be native of the Cape of Good Hope, but we suspect he has been misinformed. The New Holland species differ from those of the Cape by their stamens spreading all round the corolla; we have as yet only seen two species which have flowered in our collections, from that country, but Mr. Colvill has raised a third last year from seed, which is very different, though apparently of the same tribe, but has not flowered.

The plants of this section succeed best in a mixture of sandy loam and peat; they may be increased by cuttings planted in pots in the same kind of soil, but the best method of increasing them is by seeds, which ripen in abundance.





A. Smith. del.

Ed. by J. Ridgway 170. Possibly Made in 1827.

J. Wall.

PELARGONIUM *glaucum*.

Glaucous-leaved Stork's-bill.

P. glaucum, pedunculis 1-2 florisve, foliis lanceolatis integerrimis acuminatis concavis glaucis, stipulis lineari-subulatis, caule erecto, tubo nectarifero subsessili calyce quintuplo longiori.

Pelargonium glaucum. *Willden. sp. pl.* 3. p. 654. *Pers. syn.* 2. p. 230. *Hort. Kew. ed.* 2. v. 4. p. 170. *L'Herit. geran. t.* 29. *Hort. sub. lond.* p. 151. n. 74.

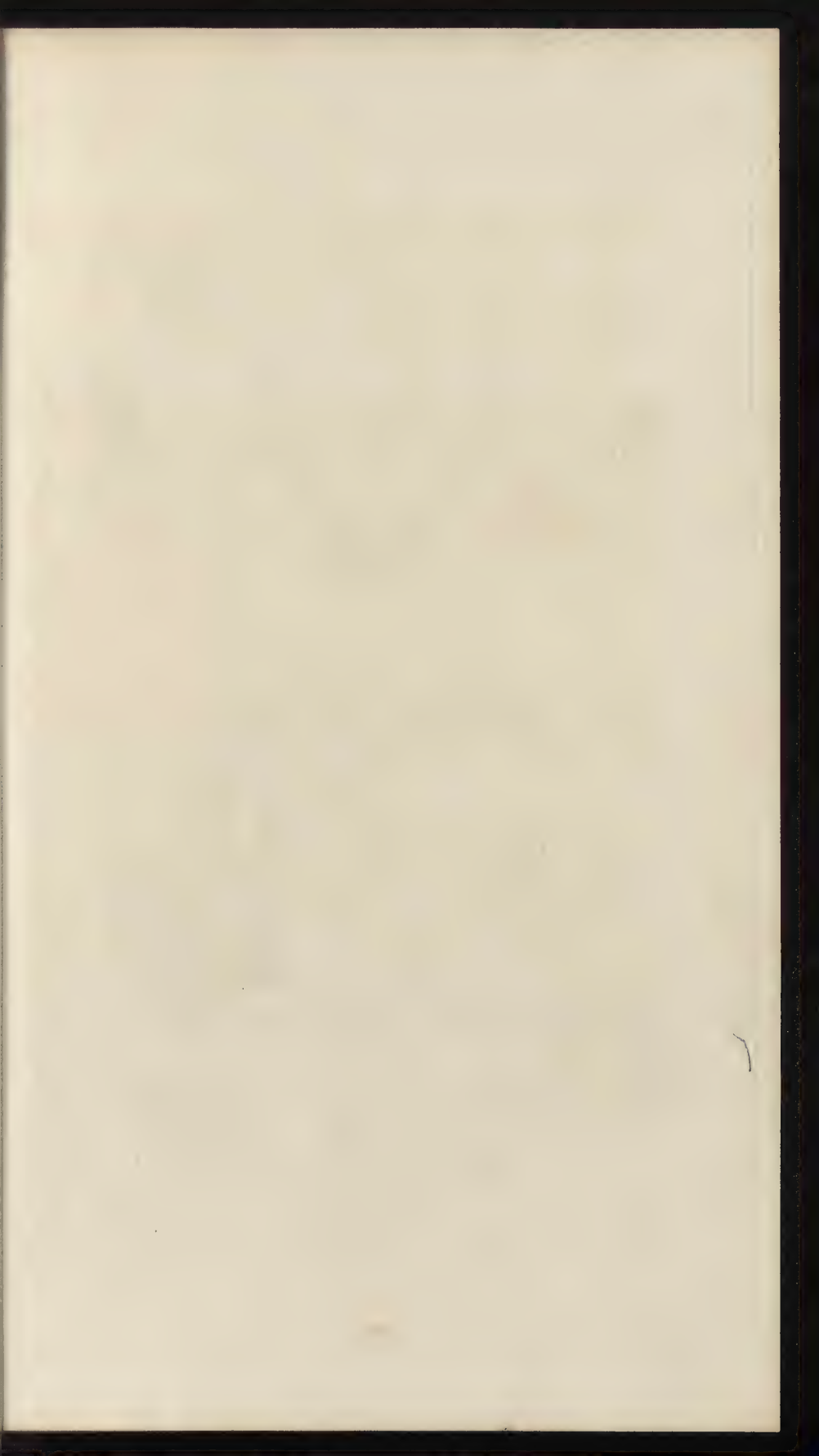
Geranium glaucum. *Andrews's geran. c. ic.*

Geranium lanceolatum. *Botan. magaz.* 56. *Cavan. diss.* 4. p. 235. t. 102. f. 2; non *Andrewsii*.

Stem shrubby, erect, with few branches. *Branches* erect, long and slender, slightly angular, smooth and glaucous; young ones tinged with red, particularly at the joints. *Leaves* lanceolate, or spoon-shaped, entire or seldom toothed, taper-pointed, concave, quite smooth and glaucous. *Petioles* long and slender, nearly cylindrical, slightly flattened and furrowed on the upper side, a little swollen at the base; *on the flowering branches* much shorter and thicker. *Stipules* linear or awl-shaped, entire, taper-pointed. *Peduncles* cylindrical, 1 or 2-flowered, either axillary or opposite to the leaf. *Involucre* of 2 lanceolate, concave, taper-pointed bractes. *Calyx* 5-cleft, segments lanceolate, concave, acuminate, the upper one erect, the others reflexed. *Nectariferous tube* nearly sessile, much flattened on both sides, about 5 times the length of the calyx. *Petals* 5, the 2 uppermost largest, obovate, at first of a buff colour, but changing to a clear white, with a

bright red spot in the centre, which joins 2. red lines from the base; lower petals oblong, obtuse, of the same colour with a forked red mark at the bottom. *Filaments* 10, united at the base, 7 only bearing anthers. *Style* flesh-colour, very hairy at the base. *Stigmas* 5, red, reflexed.

Our drawing of this pretty and curious species was taken at the extensive collection of Robert H. Jenkinson, Esq.; it is an old inhabitant with us, though it has become scarce in our collections, and is deserving a place in them all from its beauty and singularity; it is rather more tender than its relatives, being very apt to suffer in winter from wet; it thrives well in a mixture of turfy loam, peat, and sand, and succeeds in a smallish sized pot well drained with potsherds: it will then flower in succession all the summer till late in autumn. Cuttings strike root readily, planted in pots, and set in a shady situation. Seeds also ripen in abundance, if care be taken to apply the pollen to the stigma when in full bloom.





PELARGONIUM sæpeflorens.

Frequent-flowering Stork's-bill.

P. sæpeflorens, umbellis multifloris, foliis cordatis leviter quinquelobis crenatis planis subtus tomentosis, stipulis subulatis persistentibus, caule crasso flexuoso, tubo nectarifero subsessili calyce quadruplo longiori.

Pelargonium sæpeflorens. Supra fol. 48.

Geranium echinatum; sæpeflorens. Andrews's geran. c. ic.

Stem shrubby, of a brown colour. *Branches* flexuose, succulent, downy, of a brown shining colour. *Leaves* flat, cordate, slightly 5-lobed, bluntly notched, densely tomentose on the lower side and pubescent on the upper. *Petioles* flattened on the upper side and convex below, thickly clothed with short white hairs. *Stipules* persistent, subulate, but wider at the base, rigid, of a brown colour. *Peduncles* many-flowered, covered with short unequal hairs. *Involucre* of several lanceolate, concave, keeled bractes. *Calyx* 5-cleft, segments lanceolate, upper one erect, the others smaller, and reflexed or revolute, all thickly clothed with long soft hairs. *Nectariferous tube* nearly sessile, slightly flattened on both sides, and covered with short hairs; about 4 times the length of the calyx. *Petals* 5, the two upper ones obcordate, of a bright rose-colour, with a light spot in the centre, and below it are two dark marks; lower petals cuneate of a light rose-colour, with an obscure mark from the base to the centre of each. *Filaments* 10, united at the base, 6 only bearing anthers, and at the back is a flattened mu-

cronated filament, as in the others of this section. *Pollen* yellow. *Capsules* hairy. *Aristæ* villous. *Style* green, with a few hairs at its base. *Stigmas* 5, pale red, reflexed.

This handsome plant is of hybrid origin, having been raised by Mr. Colvill from the seed of *P. reniforme*, which had been impregnated by the pollen of *P. echinatum*, or perhaps *P. armatum*: it is a very desirable plant, as it is in flower the greater part of the year, beginning to bloom the latter end of summer, and if kept in a warmish situation it will continue to flower through the winter, till late in spring; its flowers are also very showy, as the whole umbel is expanded at the same time. After it has done flowering and has ripened its seed, it generally becomes dormant and loses its leaves, like the other plants of this section; and should then be kept very dry, till it shows an inclination to grow again, when it may be shifted into other well-drained pots. The best soil for it is an equal mixture of turfy loam, peat, and sand. Cuttings root freely, planted in pots, in the same kind of soil, and set on a shelf in the greenhouse; the best time for taking them off is just as the plants are beginning to grow.

Our drawing was taken at the nursery of Messrs. Colvill and Son in October last.





GERANIUM argenteum.

Silvery-leaved Crane's-bill.

G. argenteum, subcaulescens, pedunculis bifloris, foliis septempartitis utrinque sericeo-tomentosis: laciniis lineari-lanceolatis trifidis, petalis emarginatis.

Geranium argenteum. Willden. *sp. pl.* 3. p. 707. Pers. *syn.* 2. p. 236. Hort. Kew. ed. 2. v. 4. p. 188. Botan. magaz. 504. Cav. *diss.* 4. p. 205. t. 77. f. 3.

Stems very short, growing in clusters, thickly clothed with the brown persistent stipules. *Leaves* 7-parted, nearly to the base, thickly covered on both sides with a close silky tomentum, of a shining silvery appearance: *segments* linear or more generally lanceolate, bluntish, mostly trifid, or 3-toothed, the two back ones often simple and entire. *Petioles* nearly cylindrical, clothed with a close silky down. *Stipules* lanceolate, taper-pointed, concave, membranaceous, joined to the base of the petiole, at last turning brown and remaining persistent. *Flower-stalks* branched, clothed with leaves 3 to 5-cleft, with entire lanceolate or linear segments. *Peduncles* 2-flowered. *Involucre* of 4 or 5 unequal sharply acuminate fringed bractes. *Pedicles* cylindrical, thickly clothed with short silky hairs. *Sepals* 5, ovate or widely lanceolate, concave, thickly clothed with soft hairs. *Petals* 5, broadly obcordate, of a blush colour, elegantly veined with stripes of a darker colour, which branch in all directions. *Filaments* 10, slightly united at the base, all bearing perfect anthers. *Pollen* pale yellow. *Germen* and *aristæ* thickly clothed with silky down. *Stigmas* 5, reflexed.

This pretty species of *Geranium* is native of France and Italy, and was cultivated in this country as far back as 1699, though it is still scarce in our collections, being often killed in winter by wet; it thrives in rock-work, in a sheltered situation, or may be grown in pots in a mixture of sandy loam and peat, when it should be protected in a frame in winter, or in a cool part of the greenhouse, and needs but little water; but in spring, when it is growing freely, requires a constant supply, and will then continue in bloom all the summer. We have never seen it growing so luxuriantly as this summer with Mr. Anderson, at the Apothecaries' Garden, Chelsea, where our drawing was taken; it grew in a pot amongst other alpine plants, which shaded it from the sun; its leaves were larger and more numerous, and the flowers of greater size and in more abundance, than ever we observed them in any other situation. The best method of increasing it is by seeds, which ripen plentifully: it may also be increased by dividing at the root.





G. pinnatifid.

Des. by J. Ridgway 170 *Proc. Linn. Soc. Lond.* 1. 1821.

J. W. Waller

PELARGONIUM bellulum.

Neat Stork's-bill.

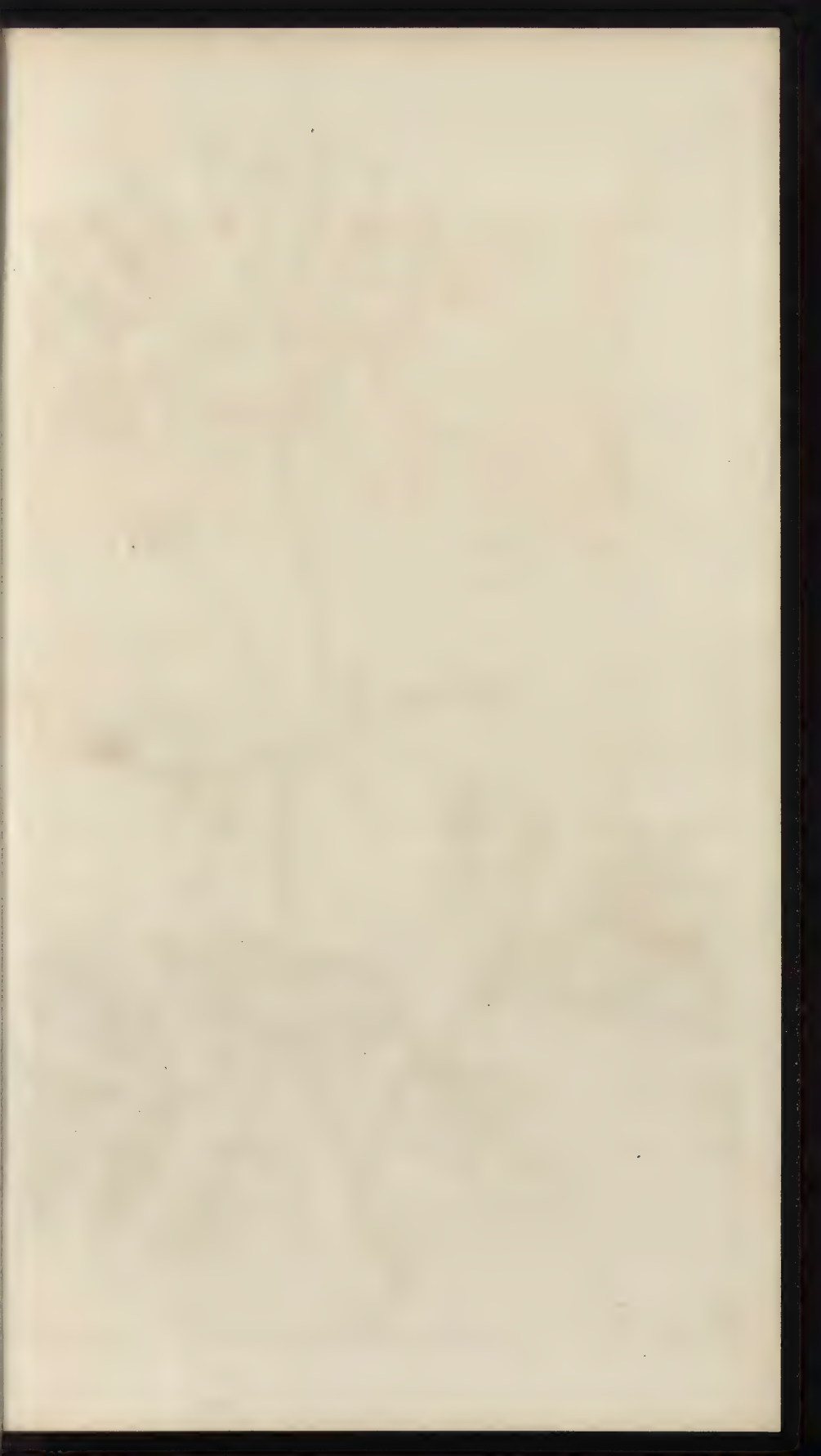
P. bellulum, pedunculis subquadrifloris, foliis cordato-cuneatis undulatis quinquelobis pubescentibus; lobis inciso-dentatis, stipulis latis cordatis ciliatis, tubo nectarifero calyce breviori.

Pelargonium rosetta. Hortulanorum.

Stem shrubby, dwarf, making a compact little bush. *Branches* covered with soft unequal hairs. *Leaves* 5-lobed, wedge-shaped, or sometimes cordate, undulate, covered on both sides with soft down: lobes jagged, unequally toothed, ciliate; *nerves* prominent, branching, covered with unequal hairs and soft down scattered among them. *Petioles* flattened and channelled on the upper side, and convex below, hairy. *Stipules* broadly cordate, ciliate, ending abruptly in an acute point. *Peduncles* generally 4-flowered, hairy. *Involucre* of 6 or 7 bractes; *bractes* lanceolate, acute, concave, keeled at the back, very hairy. *Pedicles* a little longer than the nectariferous tube. *Calyx* 5-cleft, segments very unequal, lanceolate, all reflexed. *Nectariferous tube* about the length of the calyx, flattened on both sides. *Petals* 5, two uppermost ovate, of a bright rose-colour, beautifully marked and barred with black lines, which branch in every direction; lower petals oblong, obtuse, of a pale rose-colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Style* purple, very hairy. *Stigmas* 5, purple and revolute.

Our drawing of this pretty little plant was taken in June last, at the nursery of Mr. Dennis at Chelsea,

where we saw a great number of them covered with a profusion of flowers, which made a handsome appearance. It is very desirable for all collections, being a compact little bush, and flowering abundantly all the summer; it is also as hardy as any of the genus, requiring nothing more than a common greenhouse or warm light room, to protect it in winter, when it should be watered but sparingly. A mixture of turfy loam and peat, or decayed leaves, suits it very well, or any light vegetable mould, and cuttings root readily, planted in pots, and placed in a sheltered situation. We suspect it to be a hybrid production, but cannot trace its origin.





Ranunculus *acris* *L.*

Publ. by S. Ridgway, 1770 Recut by Ap 1 1821.

PELARGONIUM gibbosum.

Knotted Stork's-bill.

P. gibbosum, umbellis multifloris, foliis ternatis glaucis: foliolis obtusis inciso-dentatis; intermedio cuneato petiolato trifido, caule nodoso: nodis tumidis, tubo nectarifero calyce quadruplo longiori.

Pelargonium gibbosum. Willden. *sp. pl.* 3. p. 684.
Pers. syn. 2. p. 233. *Hort. Kew. ed.* 2. v. 4. p. 181.

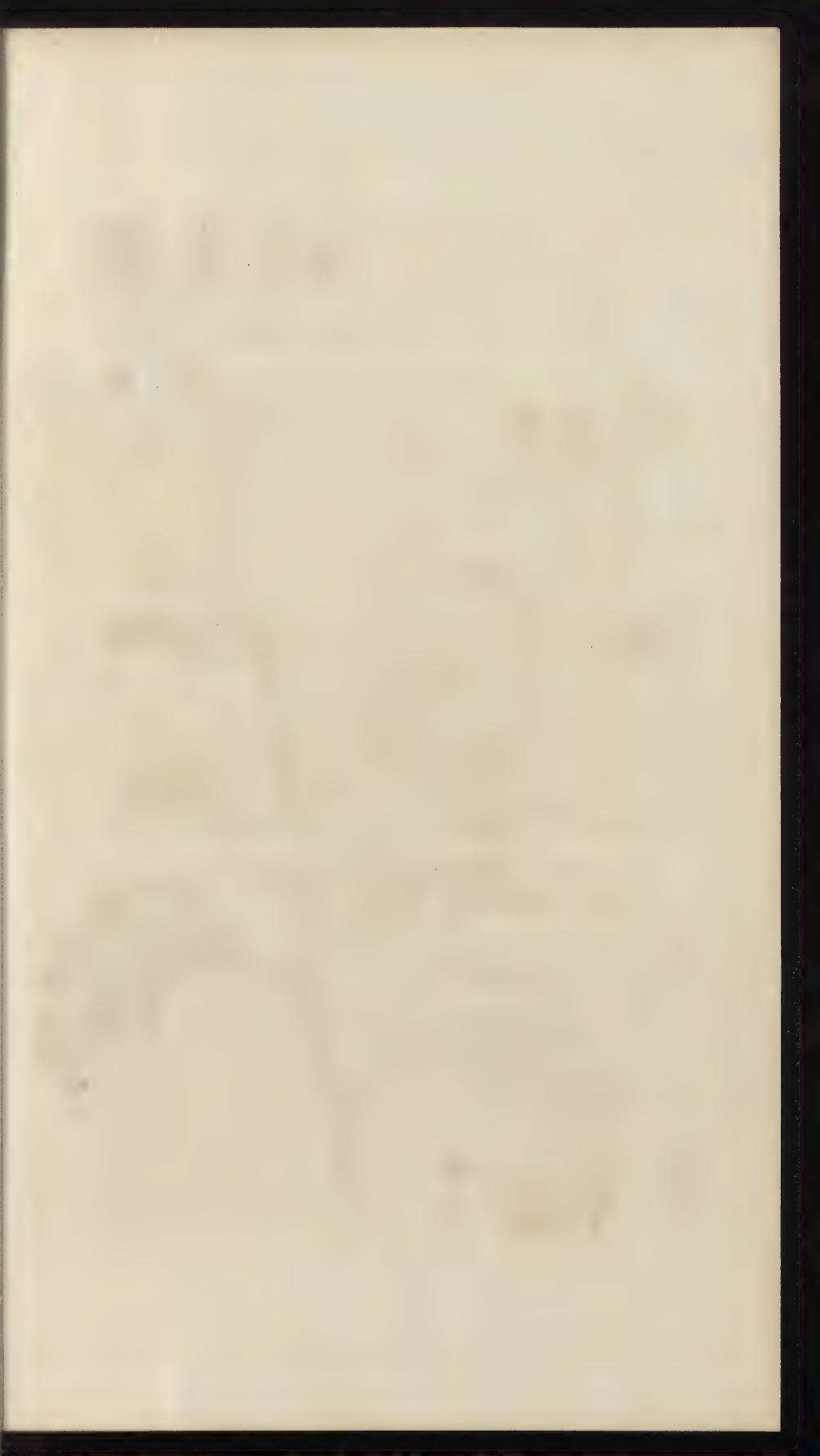
Geranium gibbosum. Andrews's *geran. c. ic.* Cav. *diss.* 4. p. 265. t. 109. f. 1. *Burm. afric. t.* 37. f. 2.

Stem shrubby, succulent, swoln at the joints. *Branches* erect, or slightly spreading, smooth, glaucous, knotted, and swoln at irregular distances; *knots* rough, arising from the permanent bases of the stipules. *Leaves* ternate, smooth and glaucous; *side leaflets* obtuse, some of them sessile, others petiolate, irregularly cut and toothed; *intermediate one* cuneate, petiolate, trifid; middle segment of the large leaves lobed, irregularly cut and toothed. *Petioles* slightly flattened and furrowed on the upper side, convex on the lower, thickly covered with uneven hairs. *Stipules* cordate, ciliate, soon withering, caducous at the top, permanent at the base. *Peduncles* axillary, or opposite to the leaf, cylindrical, slightly hairy. *Umbels* many-flowered. *Involucre* of many lanceolate acute bractes, joined at the base. *Pedicles* very short. *Calyx* 5-cleft, segments lanceolate, bluntish, reflexed. *Nectariferous tube* more than 4 times the length of the calyx, slightly flattened, a little furrowed on one side and ridged on the other, gradually tapering to the

base. *Corolla* of 5 petals, all obovate, greenish yellow, the 2 uppermost rather largest. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* pale yellow. *Germen* villous. *Style* short, green, slightly hairy at the base. *Stigmas* 5, reflex.

This curious plant, though its flowers are not so showy as some others, is still a very desirable tenant for the greenhouse, from the pleasant odour which it diffuses: in the evening when it is in bloom, we think it one of the most agreeable of the night-scented kinds, in the day it is quite scentless: its regular time of flowering is in autumn, after many of the more gaudy kinds are out of bloom. We expect some curious mules to be raised from the seeds of this species, from its being nearly connected with several sections of the genus. It is an old inhabitant of our gardens, having been cultivated in them as far back as 1712. From its succulent habit, care must be taken not to overwater it when not growing freely, particularly in winter. The best soil for it is a mixture of sandy loam and peat, or decayed leaves. Cuttings strike readily planted in pots in the same kind of soil, and set on a shelf in the greenhouse.

Our drawing was taken at the nursery of Messrs. Colvill and Son in October last.





PELARGONIUM optabile.

Desirable Stork's-bill.

P. optabile, pedunculis 2-3-florisve, foliis cordatis quinquelobis inciso-dentatis scabris, caule ramoso, stipulis acuminatis, calycibus reflexis longitudine tubi nectariferi.

Pelargonium optabile. Hortulanorum. Nobis in Collivill's Catalogue, p. 22. col. 1.

Stem shrubby, very much branched. *Branches* spreading, flexuose, thickly covered with soft unequal hairs. *Leaves* rough, cordate, 5-lobed, sharply and unequally toothed, slightly ciliate, of a pale green colour; *teeth* very large on the upper part of the lobes, and very small on the lower. *Petioles* flattened and furrowed on the upper side, convex below, widened at the upper part, and covered with soft hairs. *Stipules* small, cordate, taper-pointed, soon withering and turning brown. *Peduncles* 2 to 3-flowered, hairy. *Involucre* generally of 6 bractes, *bractes* lanceolate, acuminate, very hairy, soon withering and falling off. *Pedicles* bent, a little flattened, about the length of the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, reflex. *Nectariferous tube* flattened on both sides, very hairy, about the length of the calyx. *Corolla* of 5 petals, 2 uppermost obovate, white tinged with blush, with a large bright crimson spot in the centre, that joins numerous dark purple stripes, from the base, which branch in various directions; lower petals broadly spatulate, white. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Capsule* and *aristæ* hairy. *Style* dark red, very hairy. *Stigmas* 5, reflexed.

We suspect this pretty plant to be a hybrid production, and seemingly intermediate between *P. penicillatum* and one of the small-growing sorts, perhaps *P. dumosum*. We believe it was first raised from seed by Mr. Perry of Banbury, a great amateur of Geraniaceæ, and to whom our gardens are indebted for many handsome and curious kinds. This is one of the dwarfer sorts, and makes a compact little bush, seldom exceeding a foot or 18 inches in height, but is covered with a profusion of bloom all the summer. It is also as hardy as any of the genus, and will thrive in any common soil, or a mixture of loam and peat, or decayed leaves, will suit it very well. Cuttings root freely, planted in pots and placed in a shady situation.

Our drawing was taken last summer at the nursery of Messrs. Colvill and Son.





PELARGONIUM hybridum.

Mule Stork's-bill.

P. hybridum, pedunculis multifloris subcompositis, foliis subrotundis obsolete lobatis crenatis immaculatis, petalis cuneiformibus laciniis calycis multo latioribus, tubo nectarifero calyce duplo longiori.

Pelargonium hybridum. *Willden. sp. pl.* 3. p. 666. *Pers. syn.* 2. p. 230. *Hort. Kew. ed.* 2. v. 4. p. 171.

Pelargonium coccineum. *Ehrh. Beitr.* 7. p. 162. *Cav. diss.* 4. p. 239. *t.* 105. *f.* 2.

Geranium miniatum. *Andrews's ger. c. ic.*

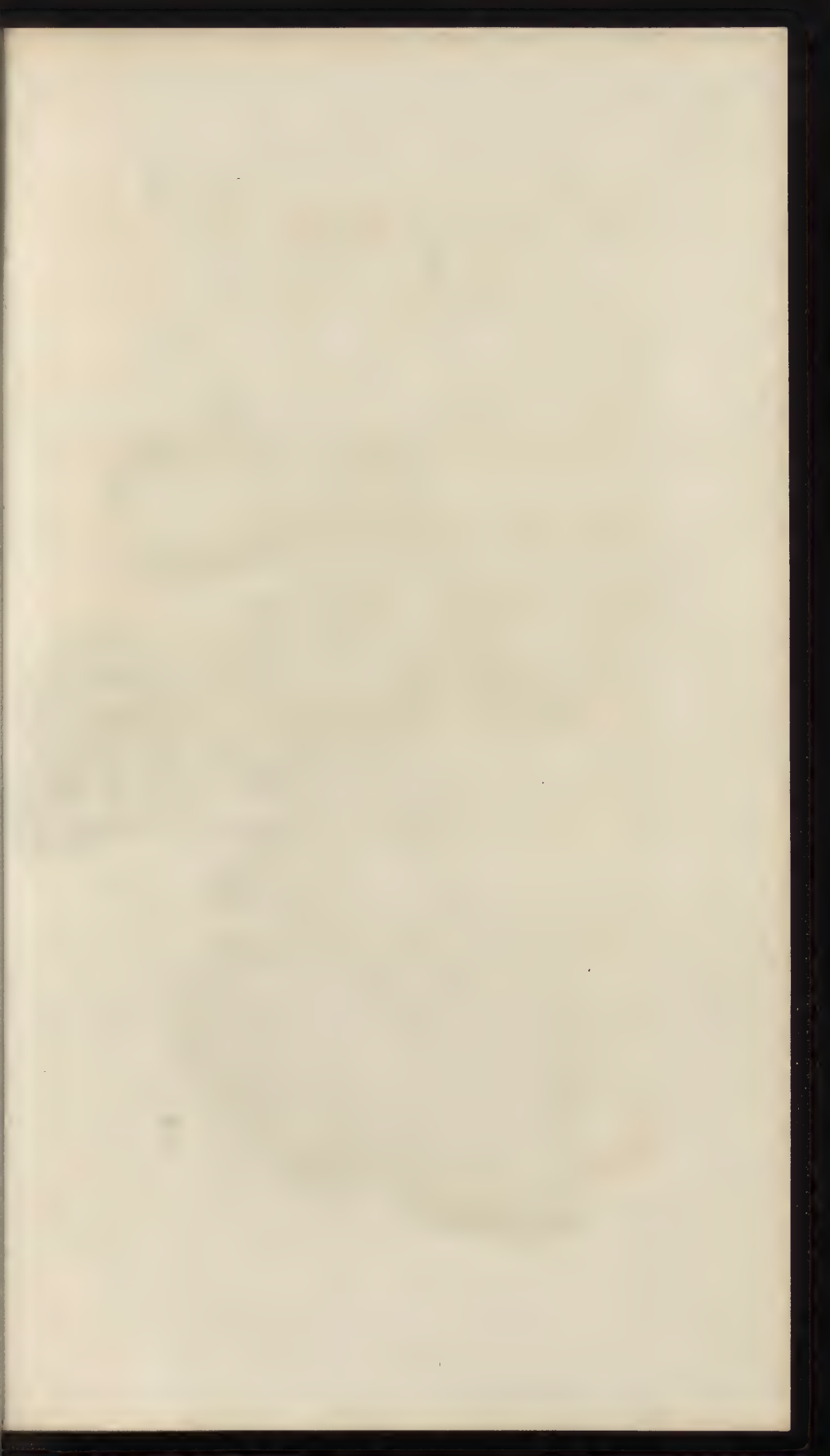
Geranium africanum arborescens, malvæ folio pingui varietas. *Dill. elth.* 125. *t.* 125. *f.* 152.

Stem shrubby, much branched. *Branches* short, flexuose, rather succulent, of a shining green colour, but thickly covered with short hairs. *Leaves* of a round kidney-shape, truncate at the base, slightly lobed, unequally notched, of a dark green shining colour, with rather a greasy appearance. *Petioles* a little flattened and slightly furrowed on the upper side and convex below, thickly covered with short hairs. *Stipules* cordate, obtuse, ending abruptly in an acute point, entire or sometimes toothed. *Peduncles* opposite to the leaf, cylindrical, bearing many-flowered umbels, often branched. *Involucre* of 6 cordate bractes, ending in an acute point. *Pedicels* very short. *Calyx* 5-cleft, segments lanceolate, upper one erect, the others much narrower, spreading. *Nectariferous tube* more than twice the length of the calyx,

flattened on both sides and generally keeled, thickly covered with short stiff hairs. *Petals* 5, or sometimes 6, wedge-shaped, of a pale scarlet colour; the two uppermost smallest and converging at the base, marked with 2 dark lines, lower ones spreading. *Filaments* 10, short and erect, united at the base, 7 bearing anthers (or 8 in the 6-petalled flowers). *Capsules* hairy. *Aristæ* spiral, bearded inwards. *Style* smooth, flesh-coloured. *Stigmas* 5, revolute.

Notwithstanding the name of this plant, we believe it to be a genuine species, having been cultivated in the gardens of this country as far back as 1732. It belongs to the same natural section as *P. monstrum*, No. 13, and is one of the tenderest species belonging to it, generally losing the greater part of its leaves in winter, except kept very dry, and in a warm situation. The best soil for it is an equal mixture of turfy loam and sandy peat, or decayed leaves; the pots must also be well drained, that the wet may pass readily off. Cuttings strike freely planted in pots in the same kind of soil, and set in a shady part of the greenhouse.

Our drawing was taken at the nursery of Messrs. Colvill and Son in September last.





G. Heron

Printed by J. P. Knapton, 17/18, St. Martin's Lane, April 1881

Printed by J. P. Knapton, 17/18, St. Martin's Lane, April 1881

PELARGONIUM Breesianum.

Breese's Stork's-bill.

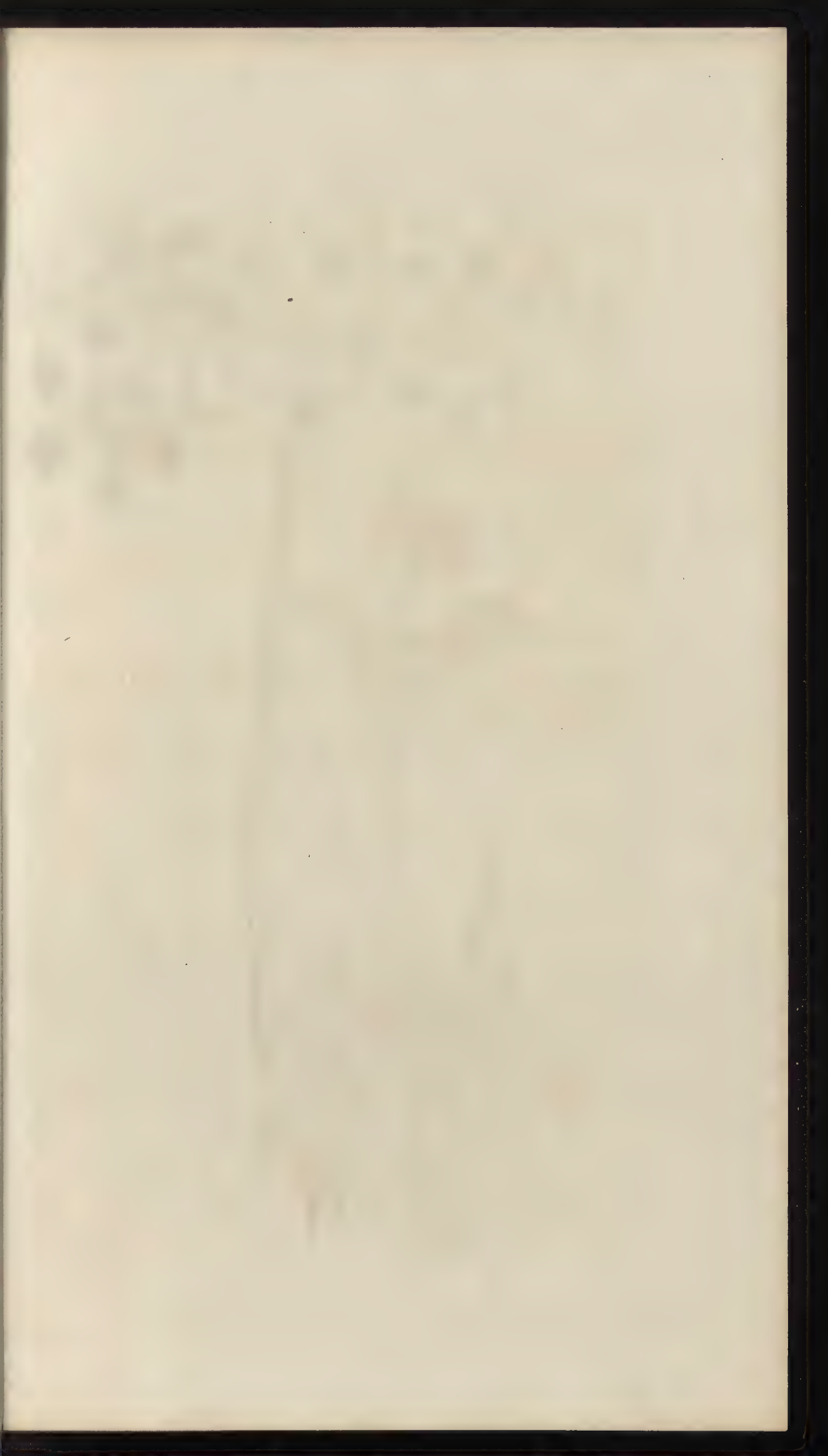
P. Breesianum, umbellis multifloris, foliis cordato-ovatis leviter quinquelobis obtuse dentatis planis margine undulatis, caule petiolis calycibusque villosissimis, tubo nectarifero calyce breviori.

Pelargonium Breesianum. Sweet's and Miller MSS. Nob. in Colv. Catal. p. 22. col. 2.

Stem shrubby, branching, of a russet brown colour, thickly covered with long soft villous hairs, as are the branches, petioles, peduncles, and calyx. *Branches* spreading, of a yellowish green. *Leaves* cordate, oval, flat, slightly 5-lobed, unequally toothed with short bluntish teeth, covered on both sides with short villous hairs; *lobes* very blunt and rounded, margins slightly undulate. *Petioles* flattened and slightly furrowed on the upper side and convex on the lower, dilated and curved in at the apex. *Stipules* cordate, sometimes toothed, taper-pointed, thickly covered with long villous hairs. *Peduncles* cylindrical, longer than the petioles. *Involucre* generally of 7 bractes, united at the base; *bractes* ovate, acuminate, keeled and ciliate. *Pedicels* very short, about half the length of the bractes, villous. *Calyx* 5-cleft, segments lanceolate, acute, $\frac{3}{4}$ of an inch long. *Nectariferous tube* shorter than the calyx, flattened and furrowed on one side and keeled on the other, thickly clothed with soft villous hairs. *Petals* 5, two uppermost widest, obovate, of a bright rose colour, with a darker spot in the centre, which joins 2 purple branched lines from the base, and between the two lines are other purple marks, on a

lighter ground; lower petals of an oblong oval, very obtuse, rose-coloured. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* red, slightly hairy on the lower part, and smooth on the upper. *Stigmas* 5, bright red, revolute.

This plant is without doubt a hybrid production, and intermediate between *P. augustum*, or perhaps *P. quercifolium*, and some of the round-leaved kinds; but we cannot trace its origin with certainty. We received it from Messrs. Sweet's and Miller, of the Bristol Nursery, who have named it in compliment to Mr. William Breese, a skilful and experienced cultivator of exotic plants. It is a hardy freegrowing sort, and continues in flower the greater part of the year. A mixture of loam and peat, or decayed leaves, suit it well, or any rich vegetable mould; and cuttings soon strike root, if planted in the same kind of soil, and placed in a sheltered situation.



PELARGONIUM imbricatum.

Imbricate-petaled Stork's-bill.

P. imbricatum, umbellis multifloris, foliis cordatis undulatis subtrifidis; segmentis lateralibus profunde bilobis: superioribus 10-lobatis apice revolutis, petalis plicatis imbricatis, bracteis oblatiis.

Pelargonium imbricatum. Nob. in Colv. Catal. p. 21. col. 3.

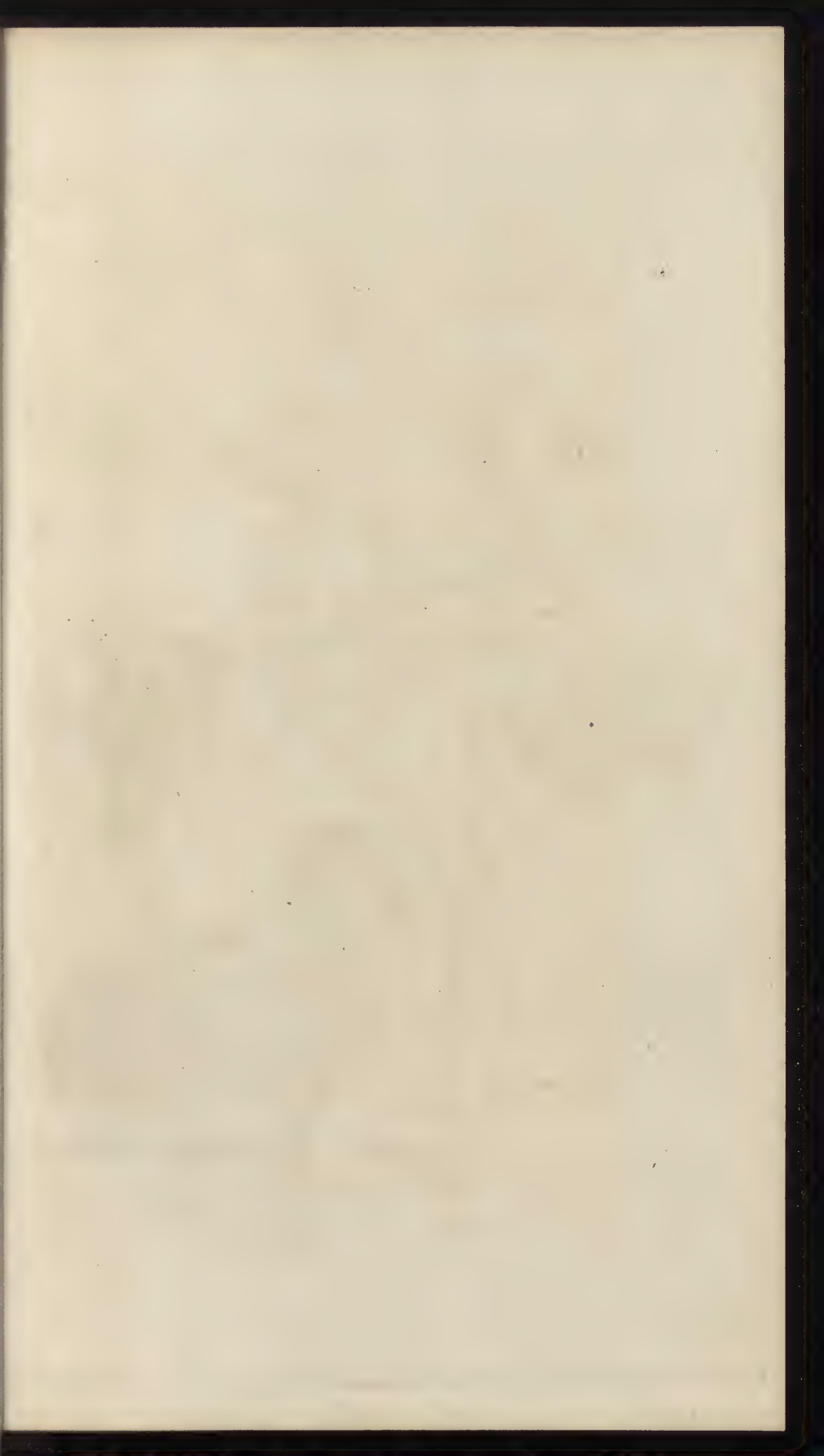
Geranium bicolor, var. magna. Andrews's ger. c. ic.

Stem shrubby, flexuose, irregularly swollen at the joints, very hairy, brown. *Branches* very thick at the base and thickly clothed with permanent stipules, the upper part tinged with reddish brown, thickly covered with unequal hairs, and from each leaf runs a light wing to the next joint. *Leaves* nearly trifid, curled and plaited, hairy on both sides, the lower ones very large; *lower segments* deeply 2-lobed, lobes unequally cut, and toothed with brown cartilaginous teeth; *upper segment* generally 10-lobed, unequally cut and toothed, revolute at the point. *Petioles* very unequal, flattened and channelled on the upper side, convex on the lower, thickly covered with unequal hairs. *Stipules* kidney-shaped, wider than long, plaited and toothed. *Peduncles* a little angular, thickened at the base, many-flowered, thickly covered with stiff unequal hairs. *Involute* of 6 or 7 leaflets, joined at the base; *leaflets* kidney-shaped, wider than long, undulate, plaited, sometimes toothed, and terminated with a short mucro. *Calyx* 5-cleft, segments unequal, elliptical or oval, 3-nerved, very obtuse, but terminated with a mucro. *Nectariferous tube* sessile, nearly twice the

length of the calyx, flattened and channelled on each side, keeled at the back, and thickly covered with short stiff hairs. *Petals* 5, imbricate, plaited, the two uppermost roundly obovate, of a light buff colour, with a dark purple spot in the centre, which pervades the greater part of the petal, and joins 4 lines from the base, which are slightly branched; below these are other short lines on the unguis; lower petals cuneate or narrowly obovate of nearly the same colour, with only 2 simple lines from the base, which joins the purple spot in the centre. *Filaments* 10, connected at the base, 7 bearing anthers. *Pollen* of a brown colour. *Germen* villous. *Style* flesh-colour, very hairy. *Stigmas* 5, purple, reflexed.

Before we examined this fine plant we always supposed it to be a variety of *P. bicolor*, but now find it as different from that as from any other species in the section. In this the petals are plaited and imbricate, in that they are flat and distinct; they are also differently marked in both; the leaves, bractes, and calyx, are also very different: it may be a hybrid production, but if so, we know not whence it has originated. We have some recollection of another nearly related to it, but of still stronger growth, with smooth shining leaves; the flowers, to the best of our recollection, resemble those of the present plant. We have not seen it for some years, but it may be a mule between our plant and *P. bicolor*. It is a fine strong-growing plant, and produces abundance of flowers through the summer, till late in autumn. A mixture of loam, peat, and sand, is the best soil for it, and the pots must be well drained with potsherds, as nothing is so injurious to it as too much wet, particularly in winter. Cuttings root freely, planted in pots, and set on a shelf in the greenhouse.

The drawing was taken at the nursery of Messrs. Colvill and Son last summer.





PELARGONIUM pectinifolium.

Scallop-shell leaved Stork's-bill.

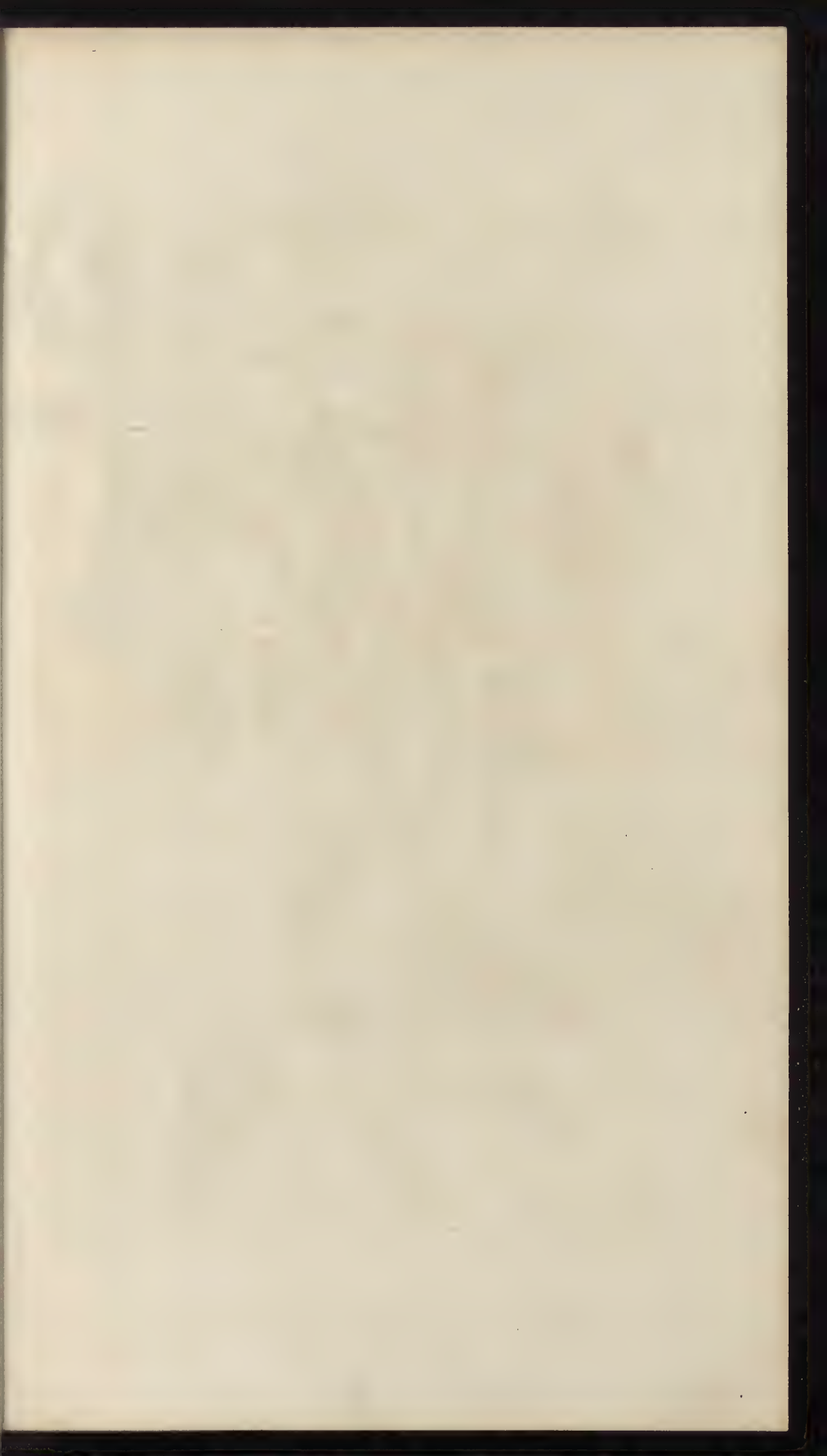
P. pectinifolium, umbellis 3-4 florisve, foliis reniformibus trilobis plicatis glabris obtusis; marginibus crispato-denticulatis, calycibus reflexis, tubo nectarifero calycis longitudine.

Pelargonium pectinifolium. *Nob. in Colv. Catal. p. 22. col. 1.*

Stem shrubby, smooth, and shining, much branched. *Branches* purple on the lower part, and green above, smooth and shining, slightly hairy. *Leaves* smooth, kidney-shaped, 3-lobed, plicate, very obtuse, with numerous furrows on the upper side, and prominent nerves below, margin curled, shallowly toothed; *lower leaves* $3\frac{1}{2}$ inches broad and 2 inches long; upper ones much smaller, but of the same proportion. *Petioles* very long and slender, flattened on the upper side, and compressed below, slightly hairy. *Stipules* widely ovate, acute, hairy, sometimes toothed, margins recurved. *Peduncles* short, 3 to 4 flowered. *Involucre* of several unequal bractes, some ovate, others lanceolate, acute, slightly hairy, margins undulate. *Calyx* 5-cleft, segments lanceolate, acute, undulate, reflexed or revolute, hairy. *Nectariferous tube* about the length of the calyx, slightly hairy and flattened on both sides. *Pedicels* very short, about half the length of the calyx. *Corolla* of 5 petals, two uppermost obovate, undulate, of a pale lilac colour, elegantly marked with purple stripes, which branch in different directions; lower petals ligulate, very much undulate, of a paler lilac or blush colour. *Filaments* 10, united at the base, 7 only bearing anthers. *Pollen* orange-

coloured. *Germen* sericeous. *Aristæ* villous. *Style* red, very hairy. *Stigmas* 5, purple and revolute. The whole plant has an agreeable scent of Lemon or Citron.

The drawing of this plant was taken at the nursery of Messrs. Colvill and Son, where it was raised from seed. We suspect it to be a mule between one of the smaller Citron-scented kinds, and a species of larger growth; it is nearer related to *P. pallidum* than to any other described one. A free-growing plant and an abundant flowerer, continuing in bloom the greater part of the summer; and though the flowers are not so showy as in some others, their number and the agreeable scent of the plant make it a very desirable acquisition. We have named it from the resemblance of its leaves to the shells of some species of the genus *Pecten*. It thrives in any light rich soil, or a mixture of turfy loam and peat, or decayed leaves, suits it as well as any thing. Cuttings root freely, planted under hand-glasses, or in pots placed in a sheltered situation.





L. Smith del.

Sub by J. Knapton, 17/6. Finiscully May 1. 1821.

Wm. ...

PELARGONIUM cordatum.

Heart-leaved Stork's-bill.

P. cordatum, umbellis multifloris paniculatis, foliis cordatis acutis dentatis planis subtus incanis pubescentibus, petalis inferis subulato-linearibus acutis.

Pelargonium cordatum. Willd. *sp. pl.* 3. p. 670. Hort. Kew. ed. 2. p. 173. Pers. *syn. v.* 2. p. 231. L'Herit. *geran. t.* 22.

Pelargonium cordifolium. Bot. mag. 165.

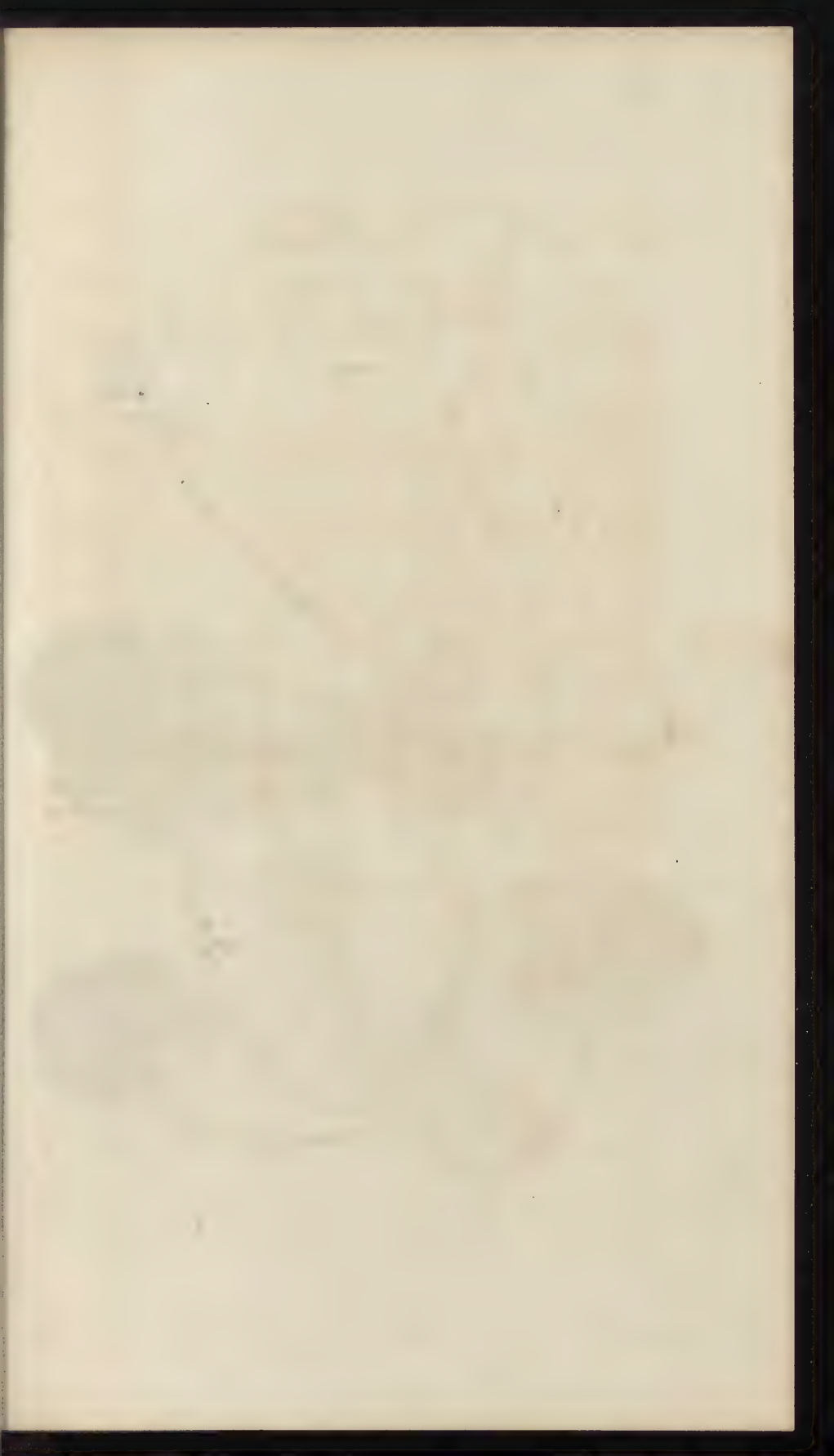
Geranium cordifolium. Cav. *diss.* 4. p. 240. t. 117. f. 3.

Stem shrubby, erect, with few branches. *Branches* erect, rigid, slightly pubescent. *Leaves* flat, cordate, acute, dentate, smooth on the upper side, underneath covered with a close white pubescence; *nerves* numerous, reticulately branched. *Petiole* about the length of the leaf, covered with a powdery pubescence. *Stipules* subulate, acuminate, recurved. *Umbels* many-flowered, panicled. *Peduncles* slightly downy. *Involucre* of 6 lanceolate, acute bractes. *Pedicles* about the length of the nectariferous tube, covered with short downy hairs. *Calyx* 5-cleft, segments erect, concave, lanceolate, acute. *Nectariferous tube* a little shorter than the calyx, widely flattened on both sides, covered with soft downy hairs. *Corolla* of 5 petals, the two uppermost spatulately obovate, very narrow at the base; of a pale rose colour, from the base branch several dark red lines, with a white mark between them; lower petals subulately-linear, ending abruptly in an acute point; pale blush colour, or nearly white. *Filaments* 10, connected at the base, 7 only bearing

anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, hairy. *Stigmas* 5, reflexed.

This fine strong-growing species is an old inhabitant of our greenhouses, being introduced from the Cape in the year 1774: it is one of the early flowering species, beginning to bloom in March, and continues to flower till late in autumn. It is not so much cultivated now as it was some years back, so many showy new ones having sprung up, which has occasioned it to be neglected; but it is well deserving a place in any collection, from its hardiness and abundance of bloom. It may be readily distinguished from all others, except *P. conduplicatum*, by its narrow lower petals, and from that by its flat leaves. It will grow freely in any rich garden soil, or a mixture of turfy loam and decayed leaves, or peat, will suit it very well. Cuttings strike root freely, planted under hand-glasses, or in pots placed in a sheltered situation.

Our drawing was taken from a plant communicated by Mr. Anderson, from the Apothecaries' Garden, Chelsea, where we are glad to find many of the old species still remaining, that are nearly lost in more modern collections.





Androsace

Androsace (L.) Gray, 1791, Bot. Beechey, 1844.

Androsace

PELARGONIUM australe.

New Holland Stork's-bill.

P. australe, umbellis multifloris capitatis, foliis cordatis sublobatis obtuse crenatis subtus villosis, caule suffruticoso diffuso, foveo nectarifero brevissimo obsoleto.

Pelargonium australe. *Willden. sp. pl.* 3. p. 675. *Pers. syn.* 2. p. 232. *Hort. Kew. ed.* 2. v. 4. p. 176.

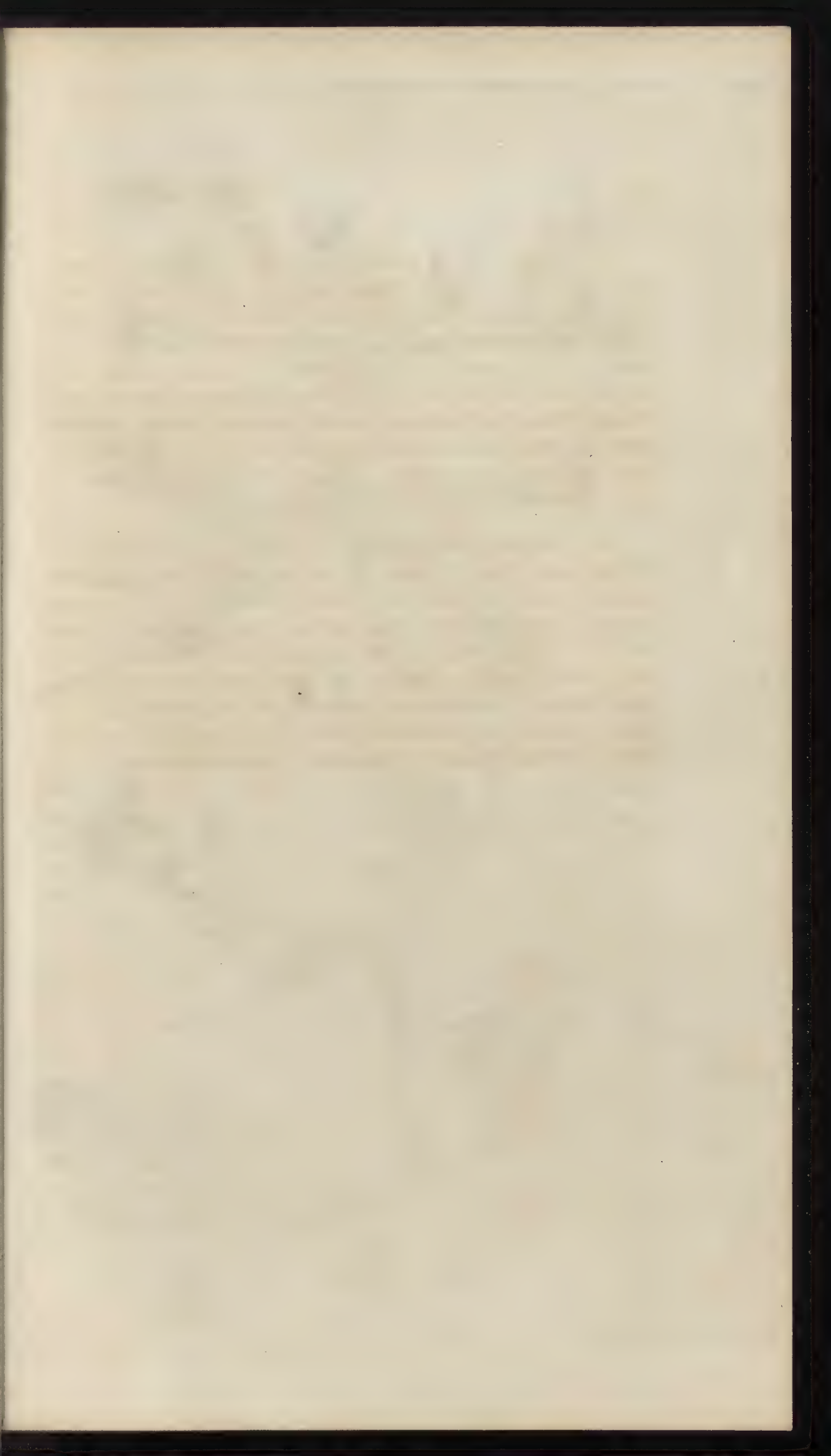
Geranium glomeratum. *Andrews's geran. c. ic.*

Stem short, suffruticose. *Branches* spreading in all directions, thickly covered with soft villous hairs, as is every other part of the plant except the corolla. *Leaves* cordate, slightly lobed, bluntly crenate with large unequal crenatures, very soft to the touch, and of a dark green colour. *Petioles* flattened and channelled on the upper side, and convex below. *Stipules* ovate, bluntish, often joined at the base, soon withering. *Peduncles* cylindrical, axillary, or opposite to the leaf; often solitary, but sometimes in pairs. *Umbels* capitate, many-flowered. *Involucre* of many bractes. *Bractes* unequal, ovate or lanceolate, generally acute. *Pedicles* longer than the calyx. *Calyx* 5-cleft, upper segment ovate, obtuse, the others lanceolate, acute. *Nectariferous pit* very shallow, scarcely any. *Petals* 5, two uppermost narrowly obovate, of a pale blush colour, with a dark red spot in the centre, which joins a few red lines that branch from the base; lower petals broadly ligulate, white, with a short red line down the middle of each. *Filaments* 10, united at the base, 7 spreading upwards and bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* very

hairy. *Style* smooth, pale red. *Stigmas* 5, red, reflexed.

This neat little species is a native of New South Wales, and has been introduced to this country ever since the year 1792, though at present it is far from being a common plant in our collections. We have seen two other slight varieties of it; but these only vary a little in the colour of the flowers, one of them being white, and not so much marked as the present, consequently not so desirable; the other is of a pretty pink or pale rose colour, which we have only seen in the collection of Robert H. Jenkinson, Esq.

Our drawing was taken at the nursery of Messrs. Colvill and Son, where it began to flower early in spring, and continued to blossom till late in autumn. An equal mixture of sandy loam and peat is the best soil for it, watering it but sparingly in winter. Cuttings root freely, planted in pots and placed in the greenhouse; but the readiest way to increase it, is by seeds, which are produced in abundance, if a little pollen be shaken on the stigmas when in bloom.





G. peltatum Ait.

Det. by J. Lindley 1770 Recueil des Jours. 1. 1821.

Pl. 40

PELARGONIUM fulgidum.

Celandine-leaved Stork's-bill.

P. fulgidum, umbellis multifloris paniculatis, foliis ternatis: foliolis sessilibus inciso-dentatis; intermedio elongato pinnatifido, caule crasso carnosio, tubo nectarifero apice inflato calyce triplo longiori.

Pelargonium fulgidum. Willden. *sp. pl.* 3. p. 684.
Pers. syn. 2. p. 233. *Hort. Kew. ed.* 2. v. 4. p. 180.

Geranium fulgidum. Andrews's *geran. c. ic.* Cav. *diss.* 4. p. 253. *t.* 116. *f.* 2. *Dill. elth.* p. 156. *t.* 130. *f.* 137.

Stem shrubby, flexuose, thick and succulent, densely pubescent, with very few branches. *Leaves* ternate, leaflets sessile, incised or deeply toothed, intermediate one elongated, pinnatifid, segments deeply cut or toothed, covered on both sides with a white pubescence. *Petioles* slightly flattened on the upper side and rounded on the lower, thickly clothed with short villous hairs. *Stipules* broadly lanceolate, acute, ciliate, joined to the base of the petioles. *Peduncles* panicled, thickly covered with soft villous hairs. *Umbels* many-flowered, when in seed spreading out in a horizontal direction or a little declining. *Involucre* of 7 or 8 lanceolate, concave, keeled bractes. *Pedicles* very short. *Calyx* 5-cleft, segments very unequal, upper one broadly ovate, erect, hollowed out to a kind of cup at the base, the others lanceolate, reflexed, all very hairy. *Nectariferous tube* about 3 times longer than the calyx, inflated towards the upper part, deeply channelled at the back, and flattened on both sides, gibbous at the base,

thickly covered with short stiff hairs. *Petals* 5, the two uppermost broadly cuneate of a bright scarlet, marked with numerous black lines which branch in all directions, lower petals ligulate of the same colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* pale yellow. *Germen* and *aristæ* hairy. *Style* green, hairy. *Stigmas* 5, scarlet, reflexed.

Our drawing of this fine species, whose brilliancy of colour cannot be imitated, was taken at the nursery of Messrs. Colvill and Son; it may be considered as the parent stock of several of the most brilliant plants of this genus, as from it were raised *P. ignescens* and *P. scintillans*; it is also one of the parents of *P. ardens*, and we suspect *P. Daveyanum* was raised from *P. Barringtonii*, mixed with this species, and not from *P. ignescens*, as we formerly supposed. From the seeds of *P. ignescens* many splendid mules have also been raised; some of them, as *P. pavoninum* and *P. rubescens*, have flowered, and we expect to see the flowers of several others this season.

This plant being of a succulent habit, requires to be grown in an equal mixture of turfy loam, peat, and sand; and the pots must be well drained, that it may not be too wet, though it requires a constant supply of water when growing freely; but in a dormant state it should be kept quite dry. Cuttings strike root readily, planted in pots and placed in the greenhouse.





PELARGONIUM coarctatum.

Close-leaved Stork's-bill.

P. coarctatum, umbellis plurifloris solitariis, foliis cordato-reniformibus leviter quinquelobis undulatis denticulatis coarctatis, caule humili, ramis brevibus confertis, tubo nectarifero calyce parum breviori.

Pelargonium coarctatum. Nob. in Colv. Cat. p. 21. col. 3.

Lavalette's Geranium. *Hortulanorum.*

Stem shrubby, very much branched. *Branches* very short and crowded together, thickly clothed with soft white hairs. *Leaves* numerous, crowded, cordate or kidney-shaped, slightly 5-lobed, undulate, unequally toothed with short rigid teeth, hairy on both sides. *Petioles* widely flattened and channelled on the upper side and convex on the lower, thickly clothed with short hairs, and some long ones interspersed amongst them. *Stipules* cordate, with an acute point, keeled, and ciliate. *Peduncles* solitary, 4 to 6 flowered, thickly clothed with soft unequal hairs. *Involucre* of 6 or 7 bractes; *bractes* oval, concave, taper-pointed, fringed, and covered with soft villous hairs. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments unequal, of a brown colour, upper one ovate, many-nerved, erect or slightly recurved, the others lanceolate, acute, reflexed. *Nectariferous tube* a little shorter than the calyx, slightly flattened on each side, hairy, and of a brown colour. *Petals* 5, the two uppermost widest, roundly ovate, of a dark reddish purple, marked at the base with black lines, which

branch in various directions; lower petals widely cuneate, of rather a lighter colour. *Filaments* 10, united at the base, 7 only bearing anthers, 3 sterile ones subulate with recurved points. *Pollen* orange-coloured. *Germen* villous. *Style* purple, thickly covered with long hairs. *Stigmas* 5, purple, revolute.

This pretty little plant is a hybrid production; we suspect it has been raised from the seeds of *P. Barringtonii* mixed with some dwarf species, as the flowers resemble the former, though the leaves and habit of the plant are very different; the leaves are nearest to *P. striatum*, but the habit of the plant differs from any we are acquainted with. It is as hardy as any of the genus, and only requires to be protected from frost in winter. A mixture of loam and peat, or decayed leaves, suits it very well, and cuttings root freely, planted in pots and placed in a shady situation.

Our drawing was taken at the nursery of Messrs. Colvill and Son, where it is covered with bloom the greater part of the year.





Walt. del.

Styl. by J. Redgway 170. G. credibly June 1. 1821.

J. Walt.

PELARGONIUM mixtum.

Mixed Stork's-bill.

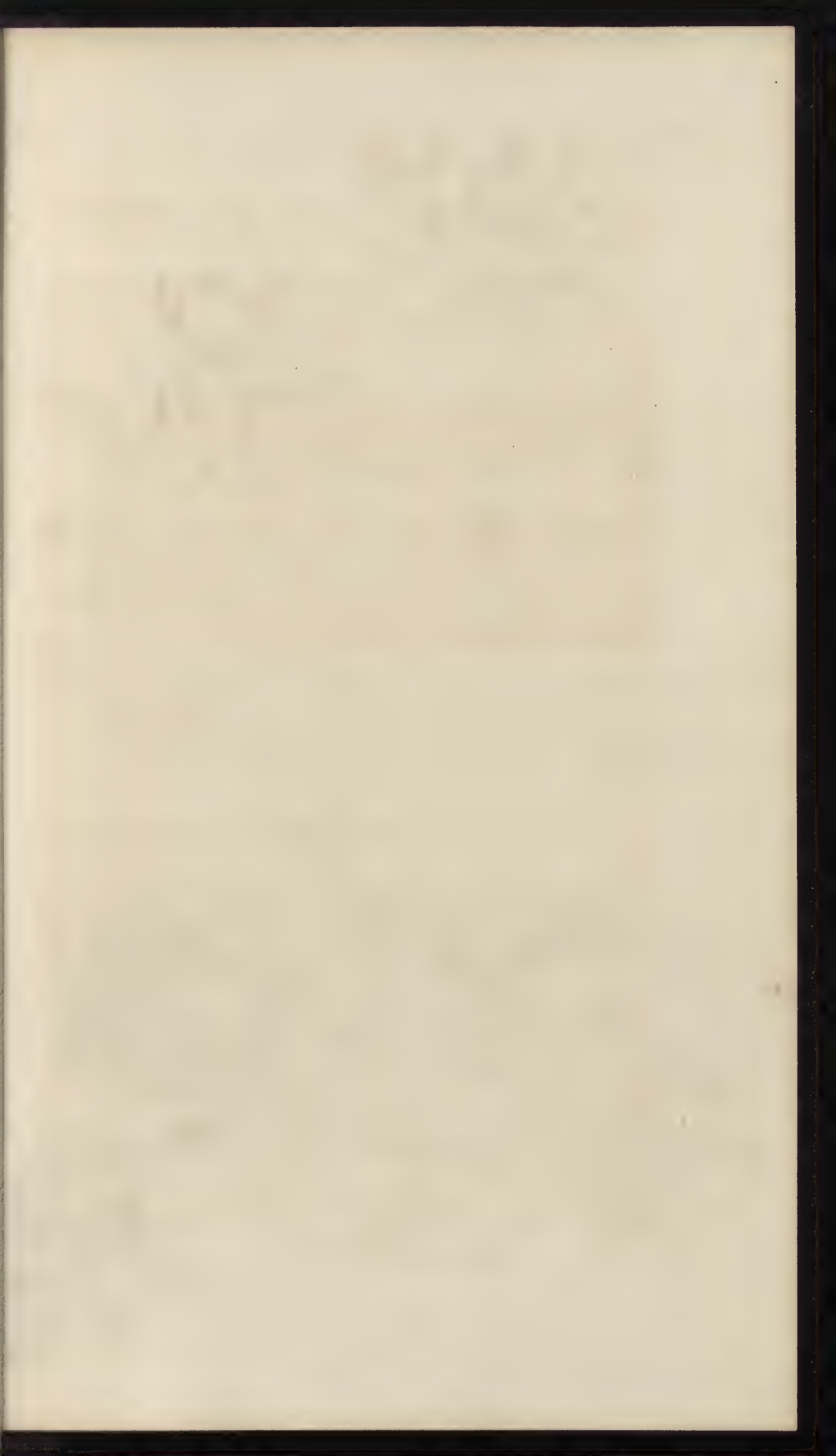
P. mixtum, pedunculis 2-4-floris, foliis subdistichis cordatis profunde quinquelobis undulato-plicatis rigidis dentatis, calycibus reflexis, tubo nectarifero calyce sublongiori.

Pelargonium mixtum. Nob. in Colv. Cat. p. 22. col. 2.

Stem shrubby, erect, branching. *Branches* slender, erect, thickly clothed with unequal hairs. *Leaves* of an agreeable scent, nearly distichous, cordate, deeply 5-lobed, undulate or plaited, rigid, sharply and unequally toothed, thickly covered on both sides with short hairs; lower lobes generally 2-lobed. *Petioles* unequal in length, gradually shortening towards the end of the shoots, flat and slightly furrowed on the upper side and convex below, thickly clothed with short hairs. *Stipules* cordate, taper-pointed, margins reflexed, ciliate. *Peduncles* 2 to 4-flowered, thickly clothed with unequal hairs. *Involucre* of 4 or 6 bractes; *bractes* lanceolate or linear, fringed and very acute. *Pedicles* about the length of the nectariferous tube. *Calyx* 5-cleft, segments reflexed, lanceolate, acute, fringed. *Nectariferous tube* scarcely longer than the calyx, flattened and slightly furrowed on both sides, thickly covered with short hairs. *Petals* 5, two uppermost obovate, of a pale blush colour, with a faint red speck in the centre and 2 others near the base, which joins 2 pale lines from the base, that are slightly branched; lower petals narrowly ligulate, of a pale blush or nearly white. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* and *aristæ* hairy,

Style red, hairy below and smooth above. *Stigmas* 5, red, revolute.

This pretty little plant is one of the numerous mules that have been produced from the seed of some of the Citron-scented tribe; it was raised at the nursery of Messrs. Colvill and Son, where our drawing was taken last summer; it is a neat-growing bushy plant, and produces abundance of flowers all the summer, beginning to bloom early in spring, and continuing in full beauty till late in autumn. It may be grown in a small pot, in a mixture of loam and peat, or light vegetable mould, and will succeed in a common greenhouse or light room in winter, only requiring to be protected from frost, and to be watered sparingly. Young cuttings strike root readily, planted in pots of mould, and placed in a shady situation.





HOAREA atra.

Dark brown Hoarea.

Hoarea. Pet. 5 inæqualia, 2 superiora parallela longe unguiculata medio abrupte reflexa. Stam. longe tubulosa petalorum inferiorum longitudine, 5 sterilia recta aut apice incurva, 3 inferiora fertilibus breviora.

H. *atra*, umbella composita, foliis glabris oblongis dentatis trifidis ternatisve integris pinnatifidisve; segmentis oblongis obovatisve obtusis, petalis planis patentibus.

Hoarea atra. Nob. in *Colv. Cat.* p. 21. col. 2.

Pelargonium atrum. L'Herit. *geran. t.* 44. Willden. *sp. pl.* 3. p. 646. Pers. *syn.* 2. p. 227. Hort. Kew. ed. 2. vol. 4. p. 161.

Root tuberous, turnep-shaped, and clothed with a soft brown scaly bark. *Stem* none. *Leaves* in clusters at the crown of the root, very variable, scarcely two alike, some being oblong or obovate and entire, others trifid or ternate, jagged, pinnatifid or deeply toothed, of a pale shining green colour, and thinly covered on both sides with simple pellucid hairs; *segments* oblong or obovate, obtuse, entire or sometimes toothed, with ciliated margins. *Petioles* long and slender, very weak and pliant, slightly flattened on the upper side, and convex on the lower, thickly clothed with soft unequal hairs. *Stipules* subulate, membranaceous, attached to the base of the petiole. *Scape* slightly branched, with little bracte-like leaves at the base of the peduncles. *Peduncles* cylindrical, thickly covered with soft white hairs. *Umbels* many-flowered. *Involucre* of several

subulate fringed bractes. *Calyx* 5-cleft, segments subulately linear, nearly equal, upper one erect, the others recurved, all thickly clothed with soft hairs. *Nectariferous tube* slightly flattened, a little curved, very hairy. *Petals* 5, the two upper ones lanceolately spathulate spreading, above the middle reflexed; lower ones subulately linear, all of a dark crimson colour, with white unguis. *Filaments* 10, united into a tube, 5 fertile ones of nearly the same length, the uppermost rather shortest, sterile ones short and subulate, curved inwards. *Pollen* orange-coloured. *Style* hairy, flesh-coloured. *Stigmas* 5, of the same colour, reflexed.

Our drawing of this pretty species was taken from the fine collection of Robert H. Jenkinson, Esq. last autumn, where it continued in full bloom for a length of time, and plants of it are now in blossom at Mr. Colvill's nursery, so that it may be expected to flower all the summer. The best mode of treatment, is to keep them quite dry when in a dormant state, but as soon as they begin to grow, they should be fresh planted in well-drained pots. They succeed in an equal portion of loam, peat, and sand; and as the pots become full of roots, require shifting into larger ones, and to be watered regularly. The best method of propagating them is from seeds, which ripen plentifully; they may also be increased from the little tubers of the roots.

This plant, with some other nearly related ones, are so different in character from the other species of *Hoarea* we have already published, that they might with propriety be detached into a distinct genus; but we think it best at present to alter the generic character a little, so as to comprise them all, and to divide the genus into two sections.

* SECT. 1. *Cal. laciniis omnibus recurvis. Fil. sterilibus subulatis rectis.*

** SECT. 2. *Cal. lacinia superiore erecta. Fil. sterilibus apice incurvis.*





S. D. Smith. del.

pub. by J. Ridgway 176 Broadway N. Y. 1881

HOAREA melanantha.

Black-flowered Hoarea.

H. *melanantha*, umbella composita, scapo folioso, foliis ovatis trifidis ternatisve integris pinnatifidis bipinnatifidisque hispidis; segmentis oblongis obtusis, petalis crispis; superioribus ex apice sese decussantibus.

Hoarea melanantha. *Nob. in Colv. Catal. p. 21. col. 2.*

Pelargonium melananthum. *Jacq. ic. 3. t. 514. Willden. sp. pl. 3. p. 648. Hort. Kew. ed. 2. vol. 4. p. 164. Pers. syn. 2. p. 227, non Andrewsii.*

Root tuberous, fusiform, scaly. *Stem* none. *Leaves* crowning the root in a radiate form, of a dark green colour, very variable, the lower ones simple, widely ovate, others trifid or ternate, pinnatifid or nearly bipinnatifid, all thickly covered with rigid hairs, as is every other part of the plant except the corolla; *segments* oblong, obtuse, generally entire but sometimes toothed or deeply divided, with fringed margins. *Petioles* stiff, widely flattened and furrowed on the upper side and convex on the lower. *Stipules* subulately linear, membranaceous, joined to the base of the petiole. *Scape* springing from the crown of the root, leafy, and producing several umbels of flowers. *Peduncles* thick and rigid, cylindrical. *Umbels* many-flowered. *Involucre* of several linearly subulate bractes, which are entire or rarely toothed. *Calyx* 5-cleft, segments linearly lanceolate with membranaceous margins; the upper one erect, the others reflexed. *Nectariferous tube* slightly curved and flattened on both sides. *Petals* 5, the 2 uppermost lanceolate, ob-

tuse, crossing each other at the point, above the middle reflexed; margins curled; lower ones linear, reflexed or revolute, all of a jet black when first expanded, with white unguis. *Filaments* 10, united into a tube, 5 fertile ones nearly of the same length, the uppermost rather shortest, sterile ones very short and curved inward like a hook. *Pollen* orange-coloured. *Style* flesh-coloured, very hairy. *Stigmas* 5, of the same colour, reflexed.

Our drawing of this curious species was taken at the nursery of Messrs. Colvill and Son, where it was in fine blossom at the same time as *H. atra* and *H. dioica*, the whole of which have perfected plenty of seeds; and if we are not much deceived in the species, *dioica* is no more diœcious than the others, for it is now loaded with perfect seeds, which have been all set with its own pollen: a fuller account will be given under that species in a future number.

This plant, as well as its relatives, is now growing and flowering abundantly at Mr. Colvill's; we find them thrive well in an equal mixture of turfy loam, peat and sand, the same as recommended for *H. atra*; after they have done flowering and have ripened their seeds, they generally become dormant; they must then be kept quite dry till they show an inclination to grow afresh, when they should have the old mould taken from them, and be planted in fresh soil, and as they grow they may be watered regularly, but only when they are quite dry; they may be increased by the little tubers of the roots, but the better way is to increase them by seeds, which ripen in abundance, if some pollen be applied to the stigmas when in bloom.





PELARGONIUM Thynneæ.

The Marchioness of Bath's Stork's-bill.

P. *Thynneæ*, pedunculis plurifloris, foliis oblatis reniformibus trilobis planis rigidis glabriusculis; lobis obtusissimis inæqualiter dentatis, stipulis oblato-cordatis acuminatis ciliatis, tubo nectarifero calyce longiori.

Pelargonium Bathoniæ. *Hoare MSS.*

Stem shrubby, much branched, and clothed with a smooth shining brown bark. *Branches* short and crowded, a little swollen at the base, thickly covered with soft unequal hairs, as are the petioles, peduncles, and calyx. *Leaves* flat, wider than long, kidney-shaped, three-lobed, rigid, smoothish and shining, thinly covered with short hairs, furrowed on the upper side, and prominently nerved on the lower; lobes very blunt, unequally toothed with blunt rounded teeth, slightly fringed. *Petioles* a little longer than the leaf, flattened and furrowed on the upper side, and convex on the lower; a little swollen at the base of the leaf. *Stipules* wider than long, cordate, ciliate, and ending in a sharp point. *Peduncles* several-flowered. *Involucre* generally of 6 bractes; *bractes* widely ovate, concave, fringed, bluntish but ending abruptly in an acute point. *Pedicels* bent upwards, shorter than the nectariferous tube. *Calyx* of 5 widely lanceolate acute segments; *segments* reflexed when the flower is expanded. *Nectariferous tube* a little longer than the calyx, widely flattened and furrowed on each side, gibbous at the base. *Petals* 5, the 2 uppermost roundly ovate, of a rose colour, with a bright red spot in the centre, which

joins 4 purple lines that are slightly branched; lower petals oblong, very obtuse, pale rose colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* rose-coloured, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, red and revolute.

This pretty plant we suspect is of hybrid origin, and was raised from seed by Sir R. C. Hoare, who has named it in compliment to the Marchioness of Bath, a great admirer of plants and an encourager of Botany; and from a fine plant sent us by Sir Richard, from his magnificent collection, our drawing and description were taken. It is not a very strong growing sort, but an abundant flowerer; and the flowers are very large, in proportion to the plant: it is as hardy as any of the genus, and thrives well in a mixture of turfy loam and peat. Cuttings soon strike root if planted in the same kind of soil, and placed in a shady situation.





CAMPYLIA holosericea.

Silky-leaved Campylia.

Campylia. Pet. 5 inæqualia: duo superiora majora, unguis margine inferiore auriculata. Stam. 5 sterilia; duo superiora longiora hamata recurva. *Lindley MSS.*

C. *holosericea*, pedunculis paniculatis; umbellis plurifloris, foliis subrotundo-ovatis obtusis duplicatodentatis holosericeis, petalis superioribus orbiculatis, caule fruticoso erecto.

Campylia holosericea. *Nob. in Colv. Catal. p. 21. col. 1.*

Stem shrubby, erect, rugged, occasioned by the persistent bases of the petioles and stipules, in our plant about 18 inches high. *Branches* clothed with a dense white tomentum. *Leaves* roundly-ovate, obtuse, clothed on both sides with a soft white dense tomentum, doubly toothed; teeth blunt, unequal. *Petioles* very long, slightly flattened on the upper side and rounded below, thickly clothed with short soft recurved hairs. *Stipules* cordate, with a long taper point, keeled, the bases remaining persistent. *Peduncles* branching. *Umbels* 4- to 6-flowered. *Involucre* generally of 6 bractes; *bractes* ovate or widely lanceolate, keeled and ciliate. *Pedicels* nodding before the flower expands, and erect when in bloom, again descending when in fruit; *fruit* erect. *Calyx* 5-cleft, segments unequal, concave, the upper one ovate, obtuse, keeled, the others lanceolate or linear, all thickly covered with short woolly hairs. *Nectariferous tube* very short and blunt, more than three times shorter than the calyx. *Petals* 5, the two uppermost orbicular, eared on the lower margin of the

unguis, of a dark crimson colour, nearly black at the base, but much lighter on the back side, lower petals broadly spatulate, very obtuse, of a light flesh colour or deep blush. *Filaments* 10, united into a tube, thickly covered with short hairs, 5 only bearing anthers, and these were imperfect in all the specimens we have examined; two upper barren filaments much longer than the others and recurved, of a flesh colour. *Germen* villous. *Aristæ* spiral, bearded inwards, very hairy. *Style* red, very hairy below and smooth above. *Stigmas* 5, red, reflexed.

Our drawing of this new and beautiful plant was taken from a fine specimen communicated by Messrs. Sweet's and Miller, of the Bristol Nursery, where it was raised from seed. From its anthers being always without pollen, we conclude it is a hybrid production, yet it will seed freely if it be set with the pollen of any of the same tribe; consequently the young plants raised from these, will all be different from the parent, and we expect some of them will be very handsome.

This appears to be one of the easiest management of the whole genus, that we have met with; it thrives in an equal mixture of turfy loam, peat, and sand, and flowers abundantly all the summer. Cuttings strike very readily, taken off in the young wood and planted in pots, which must be placed in a shady part of the greenhouse.





PELARGONIUM sanguineum.

Crimson Stork's-bill.

sanguineum, umbellis multifloris, foliis decompositis glabris apice recurvis; segmentis cuneatis incisodentatis: infimis divaricatis, caule carnosio nodoso, involucre polyphylo calycibusque ciliatis.

Pelargonium sanguineum. Sprengel in Novi Proventus Hortorum Academicorum Halensis et Berolinensis.

Stem shrubby, succulent, not much branched, swelled at the joints. *Branches* knotted at the joints, glaucous, and clothed with horizontal unequal hairs. *Leaves* decompose, smooth, of a light green inclining to glaucous, points recurved; *leaflets* pinnatifid, segments wedge-shaped, deeply cut and toothed; lower ones widely spreading with reflexed points. *Petioles* very long, nearly cylindrical, or a little flattened on the upper side, slightly hairy. *Stipules* very large, embracing the stem, cordate, ciliate, entire or sometimes cloven at the point. *Peduncles* very long, cylindrical, glaucous, and thickly covered with horizontal hairs. *Umbels* 8- to 13-flowered. *Involucre* of several lanceolate, acute, fringed bracts. *Calyx* 5-cleft, segments lanceolate, bluntish, reflexed, margin membranaceous and ciliate. *Nectariferous tube* very unequal, in some flowers very long, nearly sessile, in others very short, not much longer than the calyx, flattened on both sides and covered with short pellucid hairs. *Petals* 5, spatulate, the 2 uppermost widest, all of a dark scarlet colour, marked in the middle of each with a velvety black. *Filaments* 10, united into a tube, 7 bearing anthers, 3 sterile ones shortest, erect, subulate. *Ger-*

men sericeous. *Style* quite smooth, flesh-coloured. *Stigmas* 5, reflexed.

The only account that we have seen of this handsome species is in the work of Sprengel above quoted; we believe it has been very lately introduced into our gardens, where it promises to be a great acquisition, from the number and brilliancy of its flowers. It belongs to the same tribe as *P. ardens*, *P. bicolor*, &c. but is certainly a very distinct species. Professor Sprengel mentions another nearly related one, *P. multiradiatum*, but this differs in the blunter segments of the leaves, by its umbel producing 30 flowers, which are of a dark green colour, or perhaps of nearly the same colour as *P. triste*, which also belongs to the same tribe.

Our drawing was taken at the nursery of Messrs. Colvill and Son, where the plants are growing luxuriantly in an equal mixture of turfy loam, peat, and sand: it requires to be kept in the warmest part of the greenhouse in winter, and to be watered but sparingly, being of a succulent nature and rather more tender than the generality of its relatives. Cuttings strike root readily, if taken off at a joint, and planted in pots in the same kind of soil, and placed in a warm part of the greenhouse.





2. Smith's ed.

Pub. by J. G. G. way 170. Paradise Aug. 1. 1871.

MONSONIA speciosa.

Large-flowered Monsonia.

Monsonia. Cal. 5-sepalus. Cor. 5-petala, incisa. Stami. 15, connata: urceolo filamentorum 5-fido. Stig. 5 sessilia. Caps. 5, monospermæ, aristatæ, ad basin receptaculi rostratæ.

M. speciosa, foliis quinatis glabris; foliolis bipinnatis; segmentis linearibus acutis, caule suffruticoso anguloso, pedunculis pilosis.

Monsonia speciosa. Willden. *sp. pl.* 3. p. 718. *Botan. magaz.* 73. *Hort. Kew. ed.* 2. v. 4. p. 192. *Pers. syn.* 2. p. 238.

Geranium speciosum. Thunb. *prod.* p. 112. *Cavan. diss.* 3. p. 179. *t.* 74. *f.* 1.

Stem suffrutescent with few branches. *Branches* flexuose, weak, and slender, trailing except supported. *Leaves* quinate, smooth; leaflets bipinnate; segments linear, acute, rigid, smooth and shining, of a dark green colour. *Petioles* long and slender, nearly cylindrical, pubescent. *Stipules* lanceolate, acute, fringed, and joined to the base of the petioles. *Peduncles* longer than the petioles, slightly angular, gradually thickening upwards, slightly hairy. *Involucre* of about 6 bractes; *bractes* subulately linear, concave, acute, with fringed membranaceous margins. *Pedicles* slightly angular, thicker than the peduncle, clothed with long unequal horizontal hairs. *Sepals* 5, nearly equal, lanceolately elliptical, mucronate, 3-nerved from the base, thickly clothed with long spreading unequal hairs, margins membranaceous. *Petals* 5, equal, imbricate, widely obcordate, scalloped, with crenulate margins,

of a cream colour tinged with pink, and a beautiful red circle near the base of the flower; below that, elegantly marked with dark crimson, which branches up into the red circle. *Stamens* 15, in 5 sets, 3 in each set, hairy, all connected at the base and all bearing perfect anthers. *Anthers* incumbent. *Pollen* granular, orange-coloured. *Germen* villous. *Aristas* covered with glandular hairs. *Style* none. *Stigmas* 5, sessile, of a velvety black colour, horizontally spreading.

This beautiful and very distinct genus was named in honour of Lady Anne Monson, a great promoter of Natural History, and Botany in particular. We at present know only of three species in the collections about London, *M. lobata*, *speciosa*, and *pilosa* (*M. filia* of Andrews); the *M. spinosa* and *ovata* (*emarginata* of L'Heritier) we can hardly suppose to belong to the same genus; if the dissections at the bottom of the figures be correct, they appear distinct enough to form a new genus, intermediate between *Monsonia* and *Geranium*. Should any of our Subscribers possess plants of either of these, or any new species of *Monsonia*, we should feel much obliged by flowering specimens, or an opportunity of examining the plants.

Our drawing of this species was taken at the nursery of Messrs. Colvill and Son. We find it succeed best in an equal mixture of turfy loam, peat, and sand; and the pots well drained, that the wet may pass readily off. The best method of propagating it is from pieces of the roots planted in pots with their tops above the surface of the mould, and placed in the greenhouse; these will soon make young plants. Seeds also ripen in abundance if some pollen be shaken on the stigmas when in full bloom.





J. Smith del.

Pub. by J. Ridgway, London, 1821.

J. Smith sc.

PELARGONIUM versicolor.

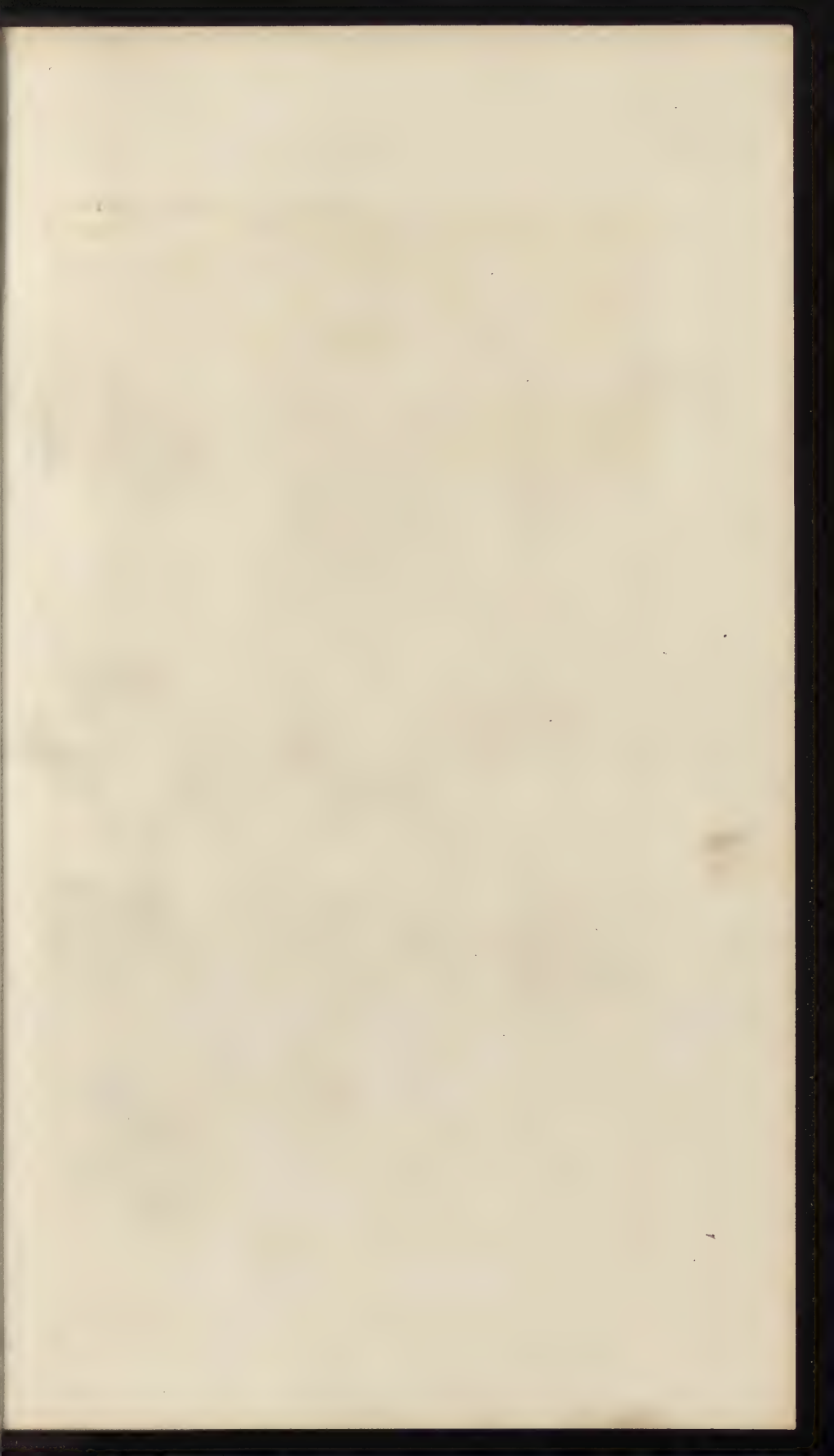
Various-coloured Stork's-bill.

P. versicolor, pedunculis plurifloris, foliis cordatis quinquelobis argute duplicato-dentatis, stipulis cordatis acuminatis dentatis, tubo nectarifero calyce duplo breviori.

Stem shrubby, branching. *Branches* thickly clothed with soft white unequal hairs. *Leaves* flat, cordate, 5-lobed, doubly toothed with very sharp rigid teeth, hairy on each side; *nerves* prominent, much branched; *lobes* blunt, and rounded. *Petioles* much flattened and furrowed on the upper side, and rounded on the lower, very hairy. *Stipules* cordate, sharply pointed and toothed. *Peduncles* several-flowered. *Involucre* generally of 6 bractes, which are short, ovate, acuminate, and keeled. *Pedicles* unequal in length, cylindrical, very hairy. *Calyx* 5-cleft, segments very unequal, upper one largest, lanceolately-oval and keeled, erect, the others reflexed. *Nectariferous tube* about half the length of the calyx, channelled on each side, slightly hairy. *Petals* 5, the two upper ones widely obovate, red or deep rose colour, often lighter on one side, and marked with numerous purple lines which branch all over the petals; lower ones oblongly-ovate, obtuse, of a blush colour, marked with pale veins. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* smooth, flesh-coloured. *Stigmas* 5, of the same colour, reflexed.

Our drawing of this pretty plant was taken at the nursery of Mr. Davey, King's Road, Chelsea. It is

without doubt of hybrid origin, but it would be difficult to guess at its parents with any certainty. It is allied in flower to *P. bellulum*, but is a much stronger growing plant, and the leaves are very different. The marking of the petals is not unlike *P. Daveyanum*, but every other part of the plant is totally dissimilar. It is a free-growing plant and an abundant flowerer, and as hardy as any other of the genus; a mixture of loam and peat mould suits it very well, and cuttings root readily, planted in pots in the same kind of soil, and placed in a sheltered situation.





J. Smith del.

Pub. by J. Ridgway 1/10 Piccadilly. May 1. 1821.

P. Watts del.

JENKINSONIA *quinata*.*Quinate-leaved Jenkinsonia.*

Jenkinsonia. Pet. 4-5, duo superiora profunde emarginata majora; inferiora multo minora. Stam. ascendentia apice patentia, basi pilosa; 7 fertilium tria superiora breviora, 3 sterilia abbreviata subulata æquilonga.

J. quinata, caule fruticoso flexuoso, foliis alternis quinquepartitis: foliolis cuneatis apice tridentatis, pedunculis subbifloris, tubo nectarifero calyce maximo duplo longiori.

Pelargonium quinatum. *Botan. magaz.* 547. *Pers. syn.* 2. p. 229. *Hort. Kew. ed.* 2. vol. 4. p. 175. *Hort. sub. lond.* p. 152. n. 115.

Geranium præmorsum. *Andrews's reposit.* 150.

Stem shrubby, flexuose, clothed with a hard brown shining bark. *Branches* covered with a short powdery pubescence, as is every other part of the plant except the corolla. *Leaves* alternate, 5-parted, upper leaflets wedge-shaped, 3-toothed; lower ones deeply cloven, segments wedge-shaped. *Petioles* a little shorter than the leaf, nearly cylindrical, but gradually tapering upwards. *Stipules* rigid, narrowly cordate, taper-pointed, remaining persistent. *Peduncles* nearly cylindrical or slightly angular, 1- to 2-flowered. *Involucre* of 2 or 3 narrowly lanceolate, taper-pointed, membranaceous, veiny bractes. *Petioles* short, cylindrical. *Calyx* 5-cleft, segments more than half an inch long, lanceolate, acute, many-nerved. *Nectariferous tube* very rigid, about twice the length of the calyx, flattened at the back and on each side, and obtusely keeled below.

Petals 4 or 5, the two uppermost widely obovate, deeply notched at the point, or nearly obcordate, of a cream colour, with numerous reddish purple lines which branch from the base, lower ones very small in proportion to the others, widely spatulate. *Filaments* 10, seven bearing anthers; *fertile ones* joined at the base, slightly hairy; and spreading at the points; *sterile ones* much shorter, erect, and subulate. *Pollen* of a brown colour. *Germen* villous. *Style* quite smooth, flesh-coloured. *Stigmas* 5, red, reflexed.

Our drawing of this very rare and curious plant was taken from some flowering specimens kindly communicated to us by Sir R. C. Hoare, who we believe is the only person that has possessed it in this country for some years past: we think it sufficiently distinct from all others that we are acquainted with to form a distinct genus, which we have the pleasure of naming in compliment to Robert H. Jenkinson, Esq. whose collection of Geraniaceæ promises soon to vie with any in the country, and to his liberality in diffusing them to other collections we bear frequent witness. It approaches nearest in character to *Chorisma**, but differs from that in having 4 and 5 petals, the 2 upper ones with scarcely any unguis and deeply emarginate; the shape and direction of the filaments is also different, besides its habit. It is a very handsome plant, but is rather more tender than most of the tribe, requiring a cool part of the hothouse or a warm part of the greenhouse to protect it in winter, when it needs but little water. We find it thrive in an equal mixture of loam, peat, and sand; and cuttings are not difficult to root if planted in pots in the same kind of soil, and set in a shady part of the greenhouse.

* *Chorisma*. Pet. 4, duo superiora longe unguiculata majora. Stam. in tubo longissimo declinato medio geniculato connata, 7 fertilium duo inferiora libera, 3 sterilia abbreviata subulata æquilonga. *Lindley MSS.* (Pelargonium tetragonum. *L'Herit.*)





PELARGONIUM Hoareanum.

Hoare's Fair Rosamond Stork's-bill.

P. *Hoareanum*, pedunculis solitariis 1-2-florisve, foliis cordato-ovatis angulatis concavis rigidis glabris; marginibus incurvis undulatis cartilagineo-dentatis ciliatis, caule ramosissimo, calycibus revolutis, tubo nectarifero calyce duplo longiori.

Pelargonium Hoareanum. Nob. in Colv. Catal. p. 22. col. 1.

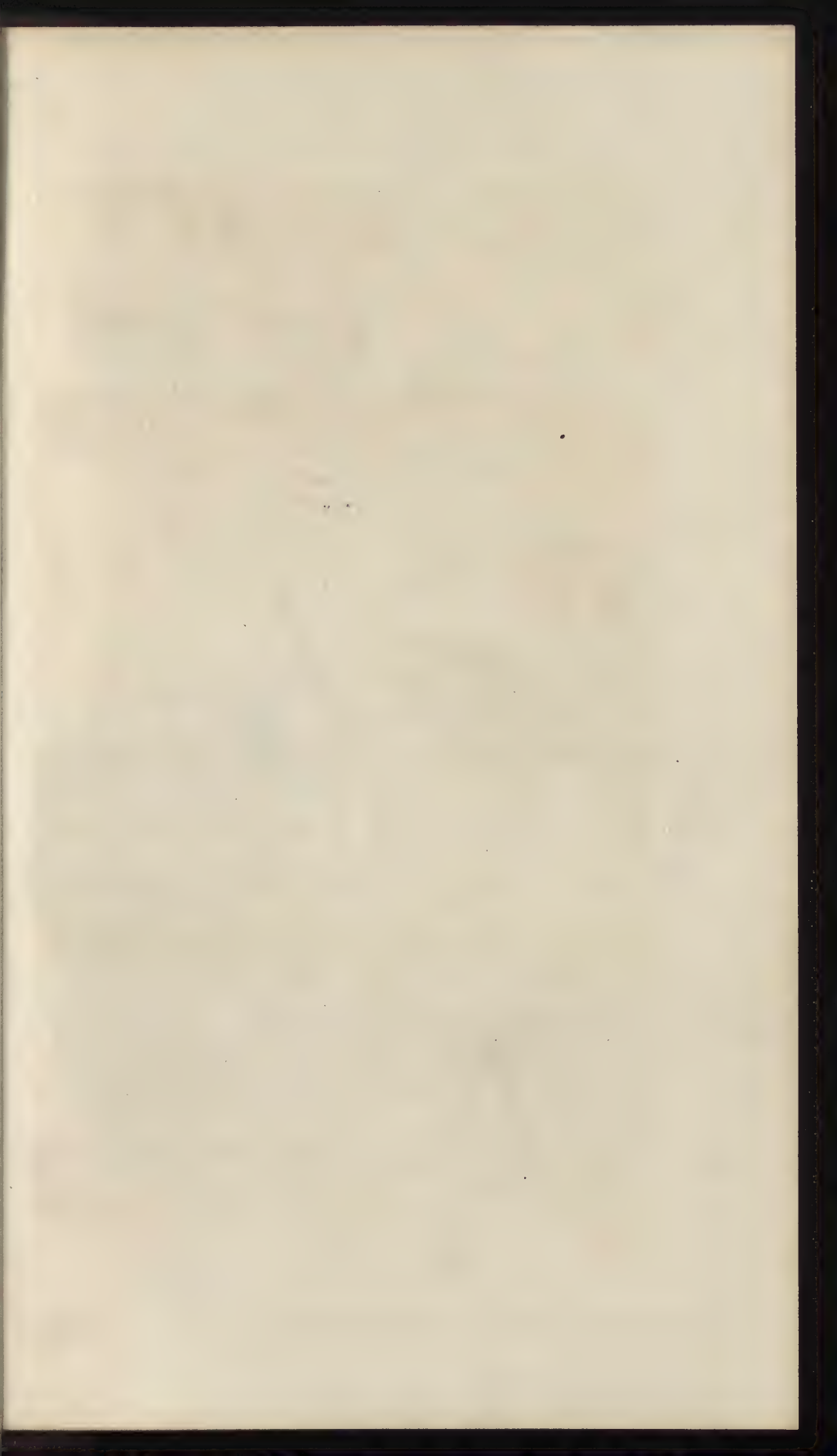
Fair Rosamond Geranium. Hoare MSS.

Stem shrubby, of a woody texture, and clothed with a rough brown cracked bark, very much branched. *Branches* rigid, flexuose, of a fine purple shining colour, slightly pubescent. *Leaves* small, of a dark green, cordately ovate, nearly as wide as long, concave, smooth, and rigid, slightly hairy; margins curved inwards, undulate, ciliate and unequally toothed with rigid cartilaginous teeth. *Petioles* longer than the leaves, slightly flattened on the upper side and rounded on the lower. *Stipules* ovate, acuminate, keeled, and ciliate. *Peduncles* solitary, opposite to the leaf, roughish, slightly angular, 1- or 2-flowered. *Involucre* of 2 or 3 ovate, obtuse, concave, keeled bractes, ending abruptly in an acute point. *Pedicels* scarcely as long as the nectariferous tube, bent upwards. *Calyx* 5-cleft, upper segment ovate, acute, keeled and recurved at the point, the others lanceolate, acute, revolute. *Nectariferous tube* about twice the length of the calyx, flattened and channelled on both sides, roughish and slightly hairy. *Petals* 5, the two upper ones

roundly obovate, of a blush colour, with a large bright crimson spot in the centre on a red ground, that joins a few purple and red lines which branch from the base: lower petals obovate of rather a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* of a light orange colour. *Germen* villous. *Style* hairy, flesh-coloured. *Stigmas* 5, red, reflexed.

Our drawing of this beautiful plant was taken from a fine specimen communicated by Sir R. C. Hoare, who informs us that he thinks it the handsomest plant he cultivates amongst all this numerous family; we have therefore named it in compliment to him. We believe it to be of hybrid origin, and suspect one of its parents to be *P. lanceolatum*, the other might be *P. penicillatum*, or some one very near it: we have this year raised several mules from *P. lanceolatum* which had been impregnated with the pollen of several other kinds, and we have never seen any vary so much; none of them are the least like the original, and scarcely two at all alike.

Sir Richard informs us that he finds this plant very difficult to increase by cuttings, being of so hard and rigid a nature that they take a long time to make roots; we have succeeded in striking some very well, by taking off very young shoots and planting them in a mixture of loam, peat, and sand, but they take a longer time to root than most other kinds. The plants thrive in a mixture of turfy loam and peat, and a little sand mixed with it to keep it open.





Smith del. Pub. by J. Sadleir 170 St. Paul's Churchyard, London, 1821.

PELARGONIUM calycinum.

Large-calyxed Stork's-bill.

P. calycinum, umbellis plurifloris subpaniculatis, foliis orbiculato-reniformibus subangulatis æqualiter denticulatis mollibus, calycibus inflatis, tubo nectarifero calyce triplo breviori.

Pelargonium calycinum. Nob. in Colv. Catal. p. 21. col. 3.

Brown's Countess of Roden. *Hortulanorum.*

Rose Brilliant Geranium. *Hortulanorum.*

α. verum, foliis suborbiculatis obsoletissime angulatis, petalis superioribus maculis minoribus et striis pallidioribus. *Supra fig. a.*

β. maculatum, foliis suborbiculatis, petalis superioribus macula magna et striis purpureis pictis. *Supra fig. b.*

γ. angulatum, foliis subcordatis inæqualiter angulatis, floribus subplenis. *Supra fig. c.*

Brown's Countess of Roden variety. *Hortulanorum.*

Stem shrubby, much branched. *Branches* thickly clothed with soft white unequal hairs. *Leaves* in var. *α.* orbicularly reniform, scarcely lobed, simply and equally toothed with short bluntish teeth, thickly covered on both sides with soft villous hairs, as is every other part of the plant except the corolla. *Petioles* widely flattened and furrowed on the upper side, and convex on the lower. *Stipules* cordate, generally toothed and ending in an acute point. *Peduncles* cylindrical, generally paniced, several-flowered. *Involucre* of several widely ovate, bluntish, sometimes toothed bractes, ending abruptly in a sharp point. *Pedicles* longer than the bractes. *Calyx* inflated, di-

vided into 5 large unequal erect segments. *Nectariferous tube* about 3 times shorter than the calyx, gibbous at the base, flattened and furrowed on each side, of a reddish brown colour. *Petals* 5, or sometimes increased to 6 or 7, of a bright rose colour, generally reflexed; the two upper ones roundly ovate, when perfect they are marked in the centre with a bright purple spot, and from the base branch numerous purple and red lines which are lightest at the outsides; lower petals oblongly ovate, obtuse, slightly marked with pale red lines. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, hairy on the lower part and smooth on the upper. *Stigmas* 5, red, reflexed.

In *var. β.* the upper petals are marked with a much larger purple spot, and the lower ones are more distinctly striped: in other respects it is very similar to *var. α.*

In *var. γ.* the flowers are generally double, and marked much like *var. α.* but the lower petals are more distinctly striped, the leaves are nearly cordate, and unequally angular, with fewer teeth than in the other varieties, and the whole plant has a kind of monstrous appearance.

Our drawing was taken from a fine specimen sent to us from the collection of the Miss Leekes of Longford, Shropshire, who inform us that it was raised from the seed of the variety of *P. cucullatum*, known by the name of the *Prince Regent's Geranium*; we also received it from Messrs. Browns, nurserymen at Slough, with our third variety, who inform us that they also raised it from the same variety of *P. cucullatum*, and that it had been mixed with the pollen of *P. fulgidum*. The second variety we received from the collection of Robert H. Jenkinson, Esq.; it had been raised from the seed of the first variety, and is the handsomest marked of the three: all of them will thrive well in a mixture of sandy loam and peat, but they are very apt to rot if they chance to get too much wet. Cuttings strike root very readily, planted in pots in the same kind of soil, and set on a shelf in the greenhouse.





Witte del. Del. by J. Kalmusky 170. Pissinully Sept. 1821.

J. Witte.

PELARGONIUM atrofusum.

Dark-brown-marked Stork's-bill.

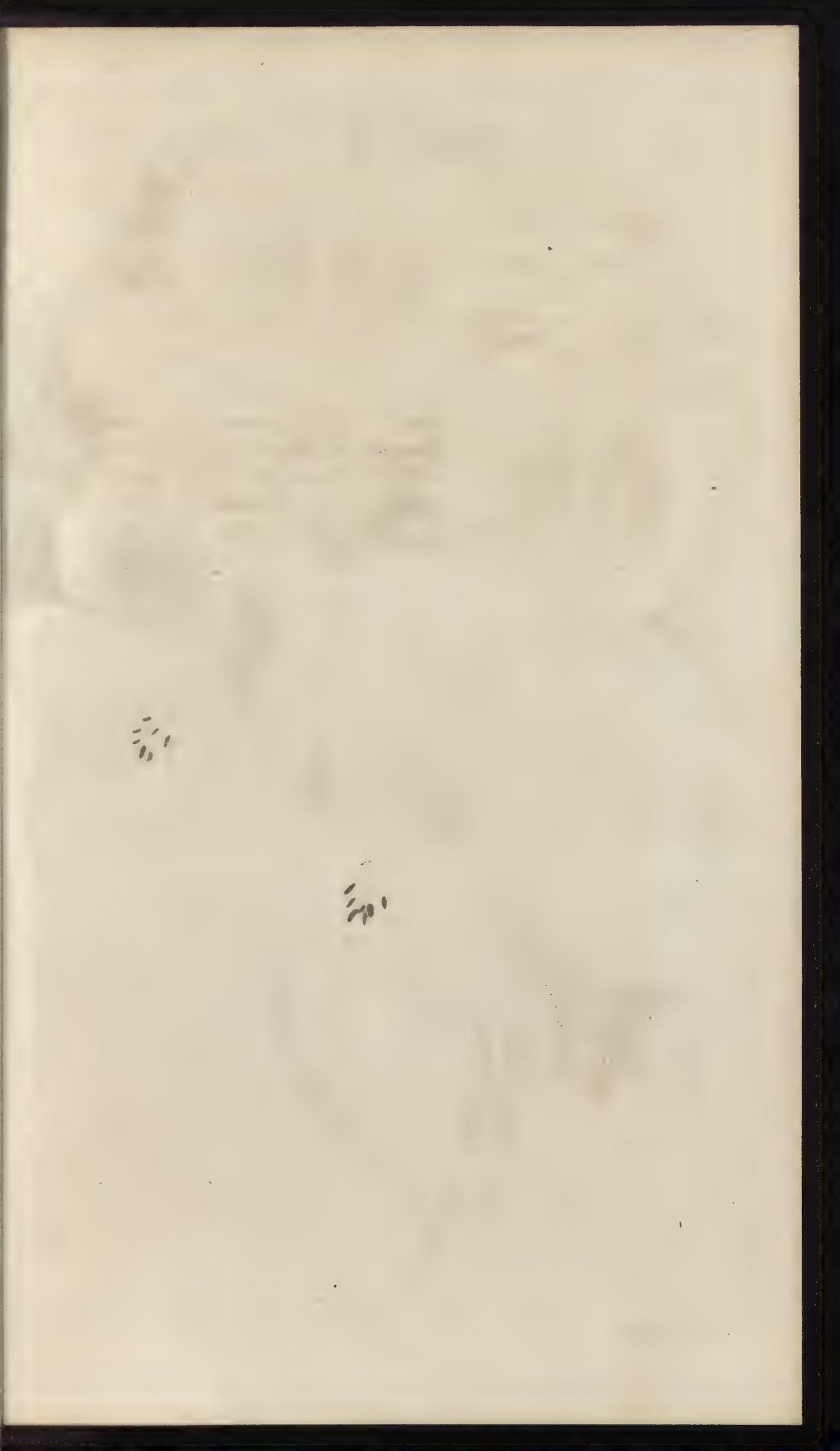
P. *atrofuscum*, umbellis plurifloris, foliis superioribus brevi-petiolatis trilobis rigidis inæqualiter argute dentatis; basi cuneatis, calycibus reflexis, tubo nectarifero breviori calyce.

Pelargonium purpureum, *fuscum*. Hoare MSS.

Stem shrubby, branching. *Branches* thickly clothed with long soft villous hairs. *Leaves on the branches* with very short footstalks, wedge-shaped at the base, deeply 3-lobed, sharply and very unequally toothed with stiff horny teeth, hairy on both sides, nerves much branched on the lower side, and furrowed on the upper; *upper leaves* nearly sessile, sharp-pointed. *Petioles* very short, on the branches, shorter than the stipules, widely flattened and channelled on the upper and convex on the lower side, thickly covered with long unequal villous hairs, as is every other part of the plant except the corolla. *Stipules* cordate, taper-pointed and ciliate. *Peduncles* several-flowered. *Involucre* generally of 6 ovate, concave, taper-pointed bractes. *Pedicles* a little longer than the bractes, but shorter than the nectariferous tube. *Calyx* 5-cleft, segments lanceolate, acute, the upper one widest, erect, the others reflexed. *Nectariferous tube* shorter than the calyx, flattened on both sides and gibbous at the base, of a reddish brown colour. *Petals* 5, the two upper ones roundly obovate, purple, with a large dark brown patch in the centre, and several dark brown lines running through it; lower petals oblong, obtuse, of a blueish rose colour. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* and *aristæ* villous. *Style*

red, hairy on the lower part and smooth on the upper.
Stigmas 5, purple, reflexed.

This handsome plant is without doubt of hybrid origin, and was raised from seed by Sir R. C. Hoare; and from some fine flowering specimens communicated by him, our drawing and description were taken: it appears to belong to the tribe allied to *P. lanceolatum* and *maculatum*; it has also some affinity to *P. obtusilobum*, but is decidedly distinct from them all. It appears to be a free grower and an abundant bloomer, and will succeed well in a mixture of sandy loam and peat. Cuttings will root freely, planted in pots and placed in a shady part of the greenhouse.





PELARGONIUM macranthon.

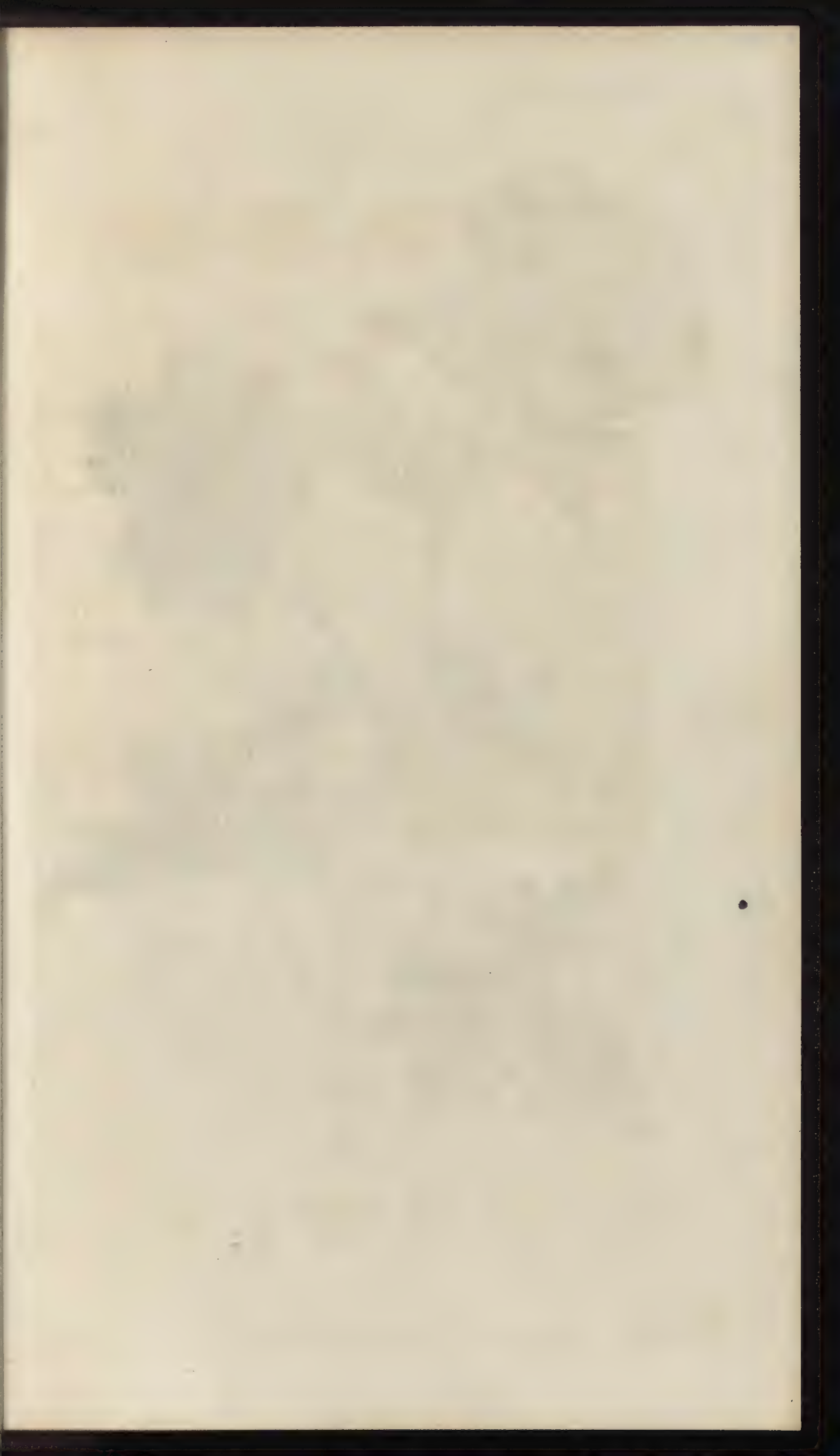
Large-flowered Stork's-bill.

P. macranthon, umbellis plurifloris, foliis inferioribus reniformibus obsolete quinquelobis cartilagineo-dentatis; superioribus profunde lobatis, bracteis cordatis pedicello duplo brevioribus, tubo nectarifero longitudine calycis.

Stem shrubby, rather flexuose, not much branched. *Branches* clothed with long spreading unequal hairs. *Leaves* variable, inclining to be succulent, hairy on both sides, deeply and sharply toothed; teeth unequal and ending in a brown callous point; *lower leaves* reniform, imbricate at the base, very slightly 5-lobed, strongly nerved underneath; *upper leaves* deeply 5 or 7-lobed; near the flowers deeply 3-lobed. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, hairy, as are the peduncles, bractes, and calyx. *Stipules* widely cordate, acuminate, toothed, and ciliate. *Peduncles* slightly angular, several-flowered. *Involucre* of 6 or 8 bractes; *bractes* cordate, concave, keeled, sometimes toothed, ciliate, about half the length of the pedicle. *Pedicles* bent upwards. *Calyx* 5-cleft, segments unequal, widely lanceolate, taper-pointed, keeled, and ciliate; upper one erect, the others reflexed. *Nectariferous tube* about the length of the calyx, flattened on each side and gibbous at the base. *Flowers* very large, above 3 inches long and 2 wide. *Petals* 5, with crenulate edges, the two upper ones obliquely ovate, each about 2 inches long and $1\frac{1}{4}$ wide, white tinged with blush, with a bright purple spot in the centre, and from the base branch numerous lighter purple stripes; lower petals oblong, obtuse,

white, tinged with blush. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, smooth. *Stigmas* 5, red, reflexed.

This handsome plant is a hybrid production, and was raised from seed last year, in the superb collection of Robert H. Jenkinson, Esq. where our drawing was taken in June last; we believe it to be the largest-flowered kind that has been raised; we suspect its parents are *P. crenæflorum* (descended from *P. grandiflorum*) and *P. involucratum*, γ . *incarnatum*. In habit and general appearance it approaches nearest to *P. involucratum*, α . *maximum*, but is readily distinguished by the following characters: in our plant the pedicles are twice the length of the cordate bractes, and the calyx is about the same length as the nectariferous tube, in *P. involucratum*, α .; the bractes are ovate and longer than the pedicles, and the nectariferous tube is shorter than the calyx: besides the difference in the leaves, it is a very free growing kind, and an abundant flowerer, and will therefore be a great acquisition to the cultivators of Geraniaceæ. It grows freely in a mixture of turfy loam and peat, and cuttings will root readily in the same kind of soil, if placed in a sheltered situation.



GERANIUM ibericum.

Iberian Crane's-bill.

G. ibericum, pedunculis bifloris, petalis trilobo-emarginatis, foliis inferioribus septemlobis inciso-dentatis; superioribus quinquelobis, caule petiolisque villosis.

Geranium ibericum. *Willden. sp. pl.* 3. p. 702. *Pers. syn.* 2. p. 235. *Hort. Kew. ed.* 2. vol. 4. p. 186. *Lamarck dict.* 2. p. 658. *Bieberst. Fl. Taur.* 2. p. 135. *Cav. diss.* 4. p. 209. t. 124. f. 1. *Botan. magaz.* 1386.

Perennial, herbaceous. *Stem* short and thick, of a brown colour, clothed with the persistent stipules and base of the footstalks. *Flowering branches* forked and elongated, thickly covered with soft villous hairs, as are the petioles, peduncles, and calyx. *Lower leaves* 7- or 9-lobed, unequally cut, and toothed with blunt teeth, rugose, and hairy on both sides; *upper leaves* on the flower-stems 5-lobed, gradually lessening upwards. *Petioles* on the lower leaves very long, slightly flattened on the upper side and rounded on the lower; on the upper leaves very short and more flattened. *Stipules* cordately lanceolate, membranaceous, keeled, and ciliate; on the lower part of the stem hardened and remaining persistent. *Peduncles* 2-flowered, or sometimes only 1-flowered, when two generally spring from the same joint. *Flowers* very large. *Sepals* 5, ovately lanceolate, 5-nerved, and terminated with a weak mucro. *Petals* 5, emarginate, 3-lobed or obcordate, of a dark blue colour, reddish at the base. *Stamens* 10, united at the base. *Style* pubescent. *Stigmas* 5,

nearly as long as the style, reflexed or revolute. *Capsules* large, opening inwards, covered with long bristly hairs. *Seeds* one in each capsule, oblong, blunt at each end, dotted all over with minute dots. *Aristas* straight, hairy.

This fine species of *Geranium*, which we believe is the largest-flowered of the genus, is sufficiently hardy to endure our winters in the open ground without protection: it is well deserving a place in every flower-border, where its numerous very large flowers will make a fine appearance: it thrives in any soil or situation, but prefers a rich light soil. It may be propagated by dividing at the root, or from seeds, which ripen in abundance; these should be sown in pots early in spring, and when of sufficient size, may be planted into the open ground.

Our drawing was taken at the collection of Robert H. Jenkinson, Esq. in June last.

We have lately received a specimen from Sir R. C. Hoare of a beautiful species of this genus, which he informs us was raised from seed given him by A. B. Lambert, Esq. who received it from the Hymalayan mountains: its brilliancy of colour exceeds all we have met with.





PELARGONIUM filipendulifolium.

Dropwort-leaved Stork's-bill.

P. filipendulifolium, subcaulescens, foliis inferioribus pinnatifido-laciniatis; pinnis obovatis lobatis incisodentatis: superioribus bipinnatifidis glabriusculis; segmentis acutis laciniatis dentatis, calycibus reflexis, tubo nectarifero calyce quintuplo longiori.

Pelargonium filipendulifolium. *Hort. sub. lond.* p. 150. n. 44. *Colv. Catal.* p. 21. col. 3.

Pelargonium triste β . *filipendulifolium*. *Bot. mag.* 1641.

Subcaulescent. Root tuberous, very large, brown and scaly, branching off into numerous other irregular tubers. Stem short, not much branched; flowering branches elongated, in our specimen between two and three feet high, of a glaucous green colour, thickly clothed with long spreading villous hairs, bearing several umbels of flowers. Leaves smoothish, but hairy on the nerves, of a light green colour, inclining to glaucous; lower ones pinnatifid or deeply lacinate; segments obovate, lobed, deeply and sharply cut and toothed; stem-leaves bipinnatifid; segments acute, deeply divided and toothed, upper leaves once pinnatifid, segments lanceolate, very sharply cut and toothed. Petioles slightly flattened on the upper side and rounded on the lower, thickly clothed with long villous hairs, as are the peduncles. Stipules large, cordate, bluntish, mostly toothed. Peduncles very long, many-flowered. Involucre of numerous lanceolate bluntish bractes, joined at the base, slightly fringed. Calyx 5-cleft, segments unequal, lanceolate, obtuse, reflexed. Nectariferous tube flattened and furrowed on each side, clothed

with short stiff hairs, more than five times longer than the calyx. *Petals* 5, the two uppermost roundly ovate, of a yellowish green, inclining to brown, unequally marked with black in the centre, lower petals oblong, obtuse, of the same colour, but more marked, the spot generally 2 or 3-forked at the apex. *Filaments* 10, united at the base, 7 bearing anthers; one of these is a flat spatulate one, as in all the plants of this section. *Germen* and *aristæ* villous. *Style* short, green, and smooth. *Stigmas* 5, spreading.

This plant is without doubt as distinct a species as any of the tribe; it differs more from *P. triste* than that does from *P. flavum*; it is of much stronger growth, producing a great many umbels of flowers on its glaucous stem; the leaves are also much less hairy than in *P. triste*, and the segments of quite a different shape; the flowers are very sweet-scented in the evening as in several other species of this section, but they are without scent during the day.

Our drawing was taken from a strong plant in the collection of Robert H. Jenkinson, Esq. in August last. It thrives best in an equal mixture of turfy loam, peat, and sand; the readiest way of propagating it is by the little tubers of the root, planted in the same kind of soil, with their tops just above the surface of the earth; these may be set on a shelf in the greenhouse, but will require very little water till they begin to grow, when they may be watered regularly.





PELARGONIUM Colvillii.

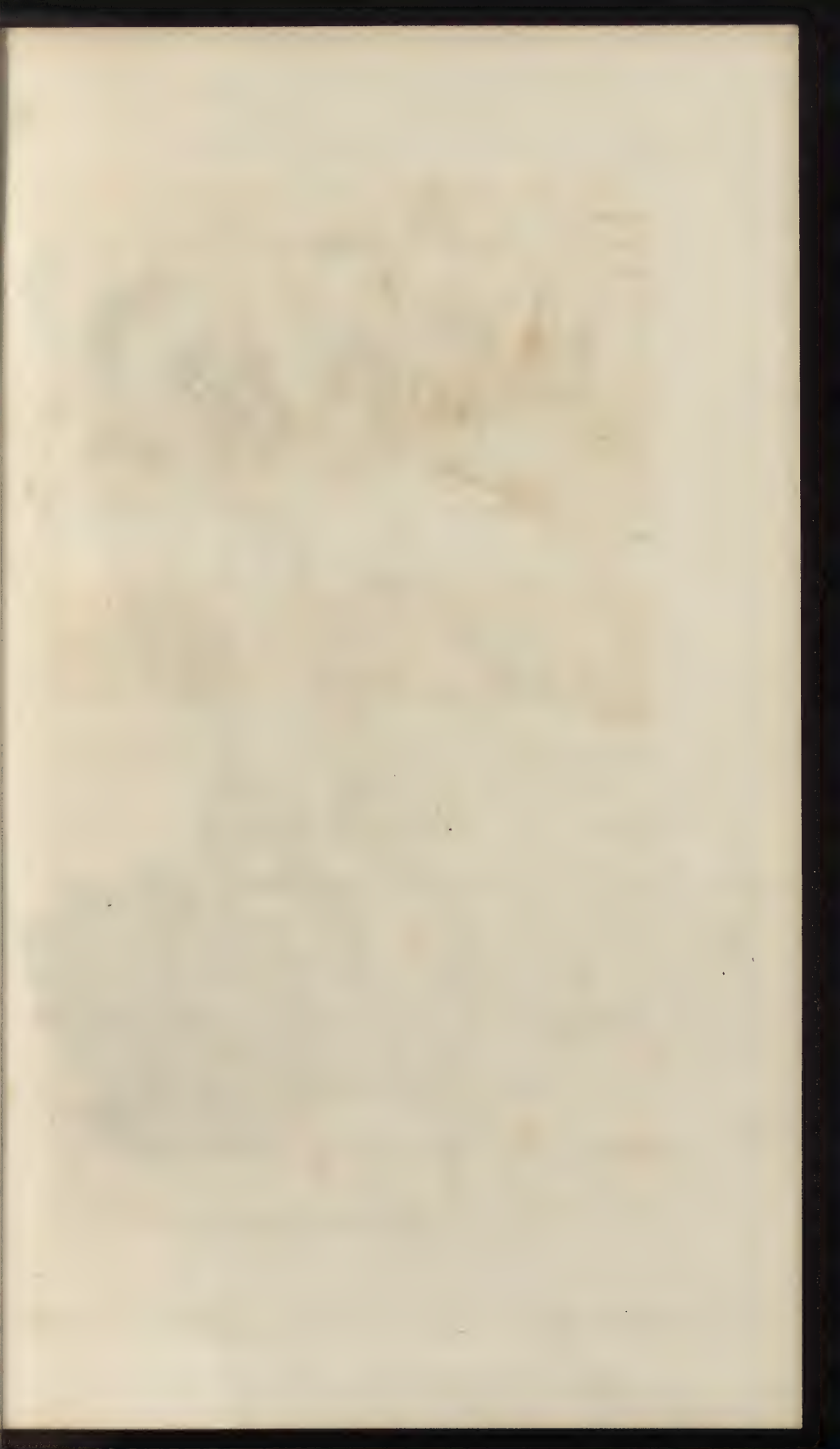
Colvill's Stork's-bill.

P. Colvillii, umbellis multifloris, foliis cordatis undulatis septemlobis cartilagineo-dentatis rigidis, petalis inferis ligulatis, calycibus reflexis, tubo nectarifero calyce longiori.

Stem shrubby, erect. *Branches* thickly clothed with long villous spreading hairs. *Leaves* rigid, cordate, undulate, seven-lobed, unequally and deeply toothed, with stiff cartilaginous teeth, the middle hollow and edges curved inwards, thickly covered with hairs on each side. *Petioles* flattened and furrowed on the upper side, and rounded on the lower, a little swollen at the base and apex, thickly clothed with long spreading villous hairs, as are the peduncles, bractes, and calyx. *Stipules* cordately lanceolate, taper-pointed, sometimes toothed and ciliate. *Peduncles* long and cylindrical, 5 to 8-flowered. *Involucre* of 6 or 7 lanceolate, acute, fringed bractes. *Pedicles* longer than the bractes, but shorter than the nectariferous tube. *Calyx* 5-cleft, segments unequal, lanceolate, acute, reflexed. *Nectariferous tube* longer than the calyx, flattened and furrowed on each side, a little swollen at the base. *Petals* 5, the two upper ones obovate, oblique, of a pale scarlet, with a large dark spot in the centre, and numerous dark lines from the base which branch in various directions; lower petals ligulate, rather paler. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* and *aristæ* villous. *Style* red, very hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, reflexed.

This fine plant is a hybrid production, and was raised last year at the nursery of Messrs. Colvill and Son, from the seed of *P. ignescens*, No. 2, that had been mixed with the pollen of *P. Mostynæ* No. 10: the flowers approach nearest in colour to the former, but the habit and strength of the plant and its rigid leaves are nearer the latter, likewise the number of flowers in the umbel: it may be considered as fine a plant as any of this tribe, and grows as freely. We have named it in compliment to Mr. Colvill, junior, whose collection of real distinct kinds of Geraniaceæ we believe will equal any in the country, and whose ardour in collecting rare and beautiful exotic plants of all descriptions cannot be surpassed.

Our drawing was taken from a fine plant in full bloom in August last: it grows freely in an equal mixture of turfy loam and peat, and a little sand mixed with it to keep it open. Cuttings strike root freely planted in pots and placed on a shelf in the greenhouse.





Trifolium repens L. var. *repens* T. Marshall Oct. 1. 1821.

J. Maltby.

PELARGONIUM Baileyanum.

Bailey's Stork's-bill.

P. Baileyanum, umbellis plurifloris, foliis inferioribus reniformibus basi truncatis sublobatis inæqualiter argute dentatis villosis: superioribus basi cuneatis subquinquelobis, tubo nectarifero longitudine calycis.

Stem shrubby, branching. *Branches* thickly clothed with soft villous unequal hairs, as is every other part of the plant except the corolla. *Lower leaves* kidney-shaped, truncate at the base, scarcely lobed, unequally and sharply toothed, with stiff cartilaginous teeth. *Upper leaves* wedge-shaped at the base, generally 5-lobed. *Petioles* widely flattened and furrowed on the upper side, and convex on the lower. *Stipules* cordately lanceolate, acute, sometimes sharply toothed, others are entire. *Peduncles* very long, nearly cylindrical. *Umbels* several-flowered. *Involucre* generally of 6 widely lanceolate acute bractes. *Pedicles* longer than the bractes, curved upwards. *Nectariferous tube* about the length of the calyx, widely flattened on both sides. *Calyx* 5-cleft, segments lanceolate, acute, upper one erect, the others reflexed. *Petals* 5, the two upper ones ovate, of a pale blush colour, with a fine dark crimson spot in the centre, which joins numerous purple lines from the base that branch in all directions; lower petals oblong, of a lighter colour. *Filaments* 10, united at the base, 7 bearing anthers. *Pollen* orange-coloured. *Germen* villous. *Style* red, slightly hairy on the lower part and smooth on the upper. *Stigmas* 5, of a darker colour, reflexed.

This fine plant is of hybrid origin, and was raised from seed by Mr. Bailey, nurseryman at Clapton, whose fine collection of Geraniaceæ exceeds any that we have seen. It is quite impossible to trace its parents with any certainty, but it is as nearly related to *P. superbum* as any that we are acquainted with: it is a free grower and an abundant bloomer, and will therefore be a desirable plant: a mixture of turfy loam and peat suits it very well, and cuttings will soon strike root if placed in a sheltered situation.

Our drawing was taken from a fine specimen, communicated to us with several others in full bloom, in June last.





V. pinnatifida

Pub by J. Ridgway 170, Piccadilly Oct. 1. 1821.

J. Watts sc.

CAMPYLIA blattaria.

Downy-leaved Campylia.

- C. *blattaria*, umbellis multifloris, foliis ovato-subrotundis plicatis incanis holosericeis crenato-dentatis, petalis superioribus subrotundis, filamentis pilosissimis, caule fruticoso erecto, foveo nectarifero brevissimo obsoleto.

Campylia blattaria. Nob. in *Colv. Catal.* p. 21. col. 1.

- Pelargonium blattarium. *Jacq. hort. schænbr.* 2. p. 3. t. 131. *Willden. sp. pl.* 3. p. 654. *Pers. syn.* 2. p. 228. *Hort. Kew. ed.* 2. v. 4. p. 166.

Stem shrubby, branching, clothed with brown persistent stipules. *Branches* short, erect, thickly clothed with short woolly hairs; *flower-stalks* elongated. *Leaves* roundly oval, plaited, densely clothed with soft white silky hairs, which give them a white shining appearance, bluntly and unequally notched or toothed, and fringed. *Petioles* very long, nearly cylindrical or a little flattened on the upper side, thickly clothed with short villous hairs, as are the peduncles, pedicles, and calyx. *Stipules* cordately lanceolate, taper-pointed, some entire, others cloven or toothed, at length turning brown and remaining persistent. *Peduncles* very long, cylindrical, many-flowered. *Involucre* of several lanceolate keeled acute bractes. *Pedicles* cylindrical, curved. *Calyx* inflated, 5-cleft, segments unequal, concave, obtuse, some nearly round or widely ovate, others narrowly lanceolate. *Nectariferous pouch* very short, scarcely any. *Petals* 5, the two uppermost nearly round, of a bright violet colour with a white spot near the base, and on one side of it is a short red line; *lower petals* ligulate. *Filaments* 10, united at

the base, thickly clothed with long shaggy hairs, 5 bearing anthers, which in our plants were always barren, 2 back sterile filaments elongated and curved back like hooks. *Germen* downy. *Aristæ* villous. *Style* red, hairy at the base, and smooth upwards. *Stigmas* 5, red, reflexed.

Our drawing was taken from a fine plant communicated from the garden of the Horticultural Society. It is at present scarce in the collections about London, though deserving a place in every one from the abundance of its pretty flowers. It begins flowering early in spring, and continues in full bloom till late in autumn; an equal mixture of loam, peat, and sand, is the best soil for it; and cuttings strike root freely, planted in pots and placed on a shelf in the greenhouse. In all the plants that we have had an opportunity of examining, the anthers were without pollen; in Jacquin's figure they are represented perfect, though his flowers are not larger than ours. Can it be dioecious?





Smith. del.

Pub. by J. Ridgway 170 Grosvenor St. Nov 1. 1821

Watt.

PELARGONIUM obscurum.

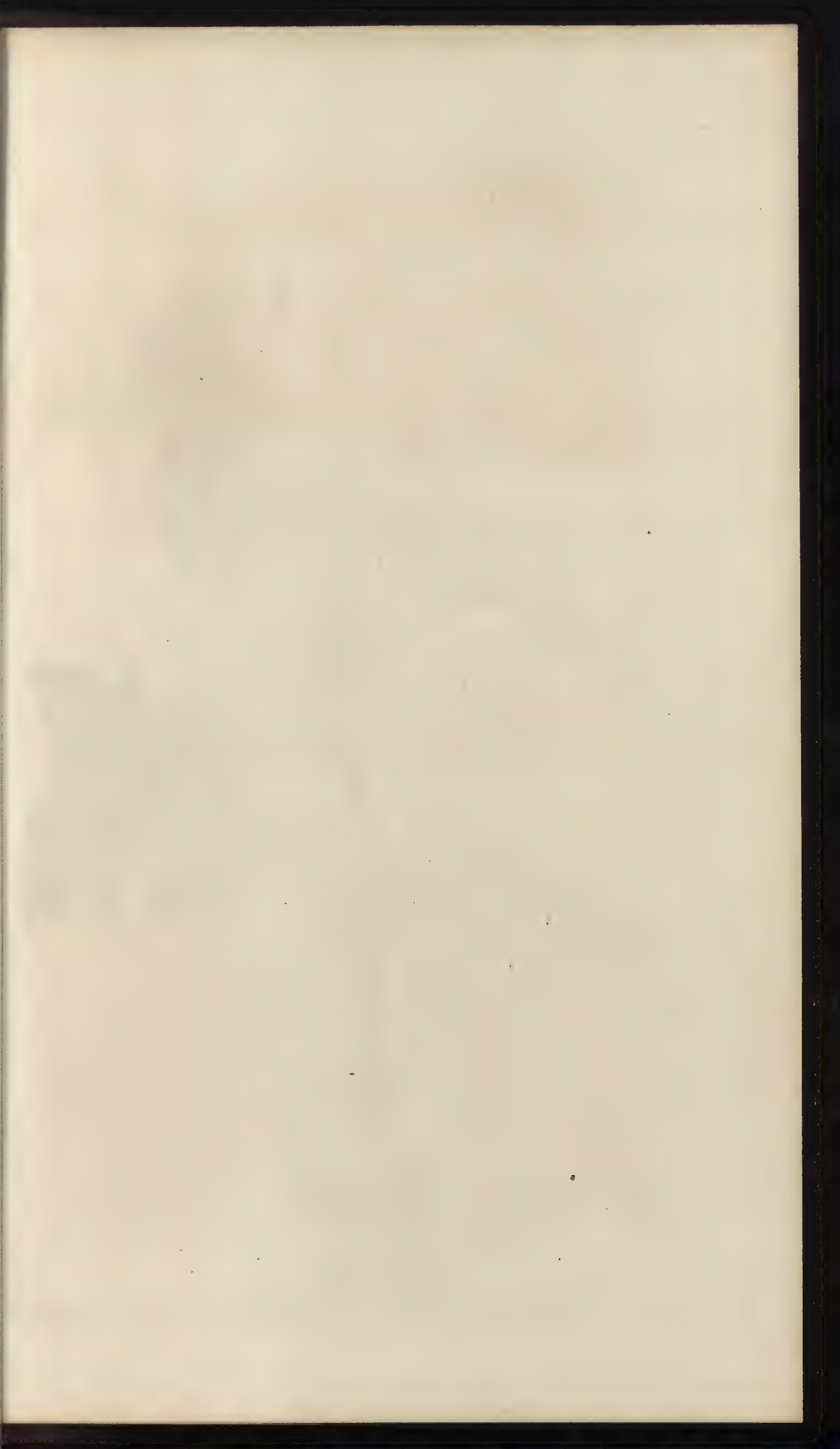
Darkened-petaled Stork's-bill.

P. obscurum, umbellis subquadrifloris, foliis oblato-cordatis, quinquelobis inæqualiter dentatis pilosis-simis: superioribus trilobis, stipulis oblatis reniformibus, petalis superioribus obcordatis, tubo nectarifero calyce parum breviori.

Pelargonium maculatum, obscurum. *Hoare Geraniaceæ*, p. 21.

Stem shrubby, much branched. *Branches* thickly covered with long unequal villous hairs, as is every other part of the plant except the corolla. *Leaves* oblately cordate, concave, lower ones 5-lobed, upper ones deeply 3-lobed, unequally toothed with bluntish rigid teeth, fringed, nerves numerous, much branched. *Petioles* short, much flattened and furrowed on the upper side, and convex on the lower. *Stipules* kidney-shaped, wider than long, with ciliated margins. *Peduncles* short, generally 4-flowered. *Involucre* of six widely ovate, blunt, keeled, ciliate bractes. *Pedicles* very short, not so long as the nectariferous tube. *Calyx* 5-cleft, upper segment ovate, obtuse, erect, the others lanceolate, reflexed. *Nectariferous tube* scarcely shorter than the calyx, widely flattened and furrowed on each side. *Petals* 5, the two uppermost obcordate, white, stained with red; in the centre is a large dark velvety spot, which covers the greater part of the petal, and from the base branch a few purple stripes; *lower petals* oblong, blunt, white, often tinged with red near the centre. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* villous. *Style* very hairy, of a pale colour. *Stigmas* 5, pale red, reflexed.

This handsome-flowering plant is related to the tribe figured by Andrews, under the name of *Geranium maculatum*. It is without doubt of hybrid origin, and will rank amongst the finest of the garden productions. It was raised from seed by Sir R. C. Hoare, who sent us the specimens from which our drawing was taken. It makes a handsome snug-growing plant, and will thrive well in a mixture of sandy loam and peat, or decayed leaves. Cuttings strike root freely, planted in pots in the same kind of soil, and set on a shelf in the greenhouse.





Geranium var.

sent by J. Endlicher 170. Philadelphia Nov. 1. 1821.

J. Walter

GERANIUM Wallichianum.

Wallich's Crane's-bill.

G. *Wallichianum*, pedunculis elongatis bifloris, foliis 5-lobis utrinque cauleque sericeo-villosis: segmentis latè cuneato-ovatis lobato-dentatis, stipulis latissimis obtusis, stigmatibus longissimis, caule erecto angulato. D. Don prod. Fl. Nepalens. ined.

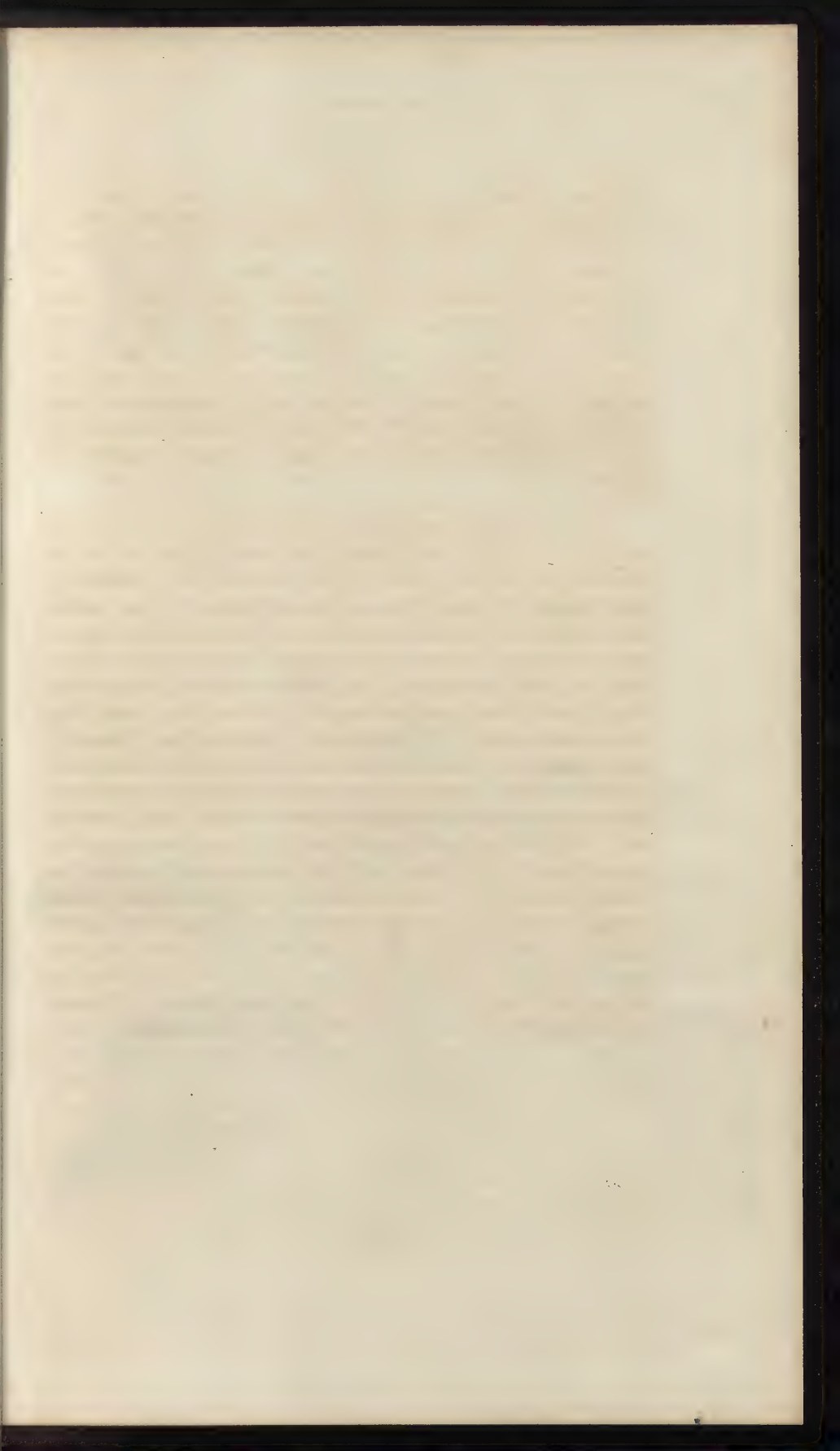
Habitat in Nepaliæ alpibus. D. Wallich. 4.

Radix perennis, cæspitosa. Caulis erectus, angulatus, subsimplex foliisque sericeo-villosus, altitudine variâ uni sesqui vel bipedalis rariùs ultra. Folia radicalia longè petiolata, 5-loba; caulina opposita, conformia: segmenta latè cuneato-ovata, lobato-dentata, basi integerrima. Stipulæ latissimæ, membranaceæ, fuscæ, integræ, obtusæ. Pedunculi elongati, axillares, 2 rariùs 3-flori, foliis duplò longiores. Pedicelli calycisque villis mollibus densè obteeti. Calycis foliola oblongo-lanceolata, nervosa, apice in mucrone subulato desinentia. Corolla magna, campanulata, purpurea. Petala obcordata. Genitalia nigrescentia. Filamenta et styli villosissima. Stigmata longissima, filiformia, glabra, revoluta. Don loc. cit.

Root perennial. Herbaceous. Branches spreading in various directions, angular, knotted at the joints, thickly clothed with unequal villous hairs. Leaves trifid, reticulately veined, thickly clothed with silky villous hairs, which gives them a velvety appearance; segments 3-lobed, unequally toothed with bluntish teeth. Petioles nearly cylindrical, thickly covered with unequal hairs. Stipules large, cordate, or roundly oval, blunt, membranaceous. Peduncles 2-flowered,

villous. *Sepals* 5, lanceolate, with membranaceous margins, terminated with a bluntish subulate mucro. *Bractes* 4, membranaceous, lanceolate, bluntish. *Petals* 5, obcordate, longer than the calyx, when first expanded of a brilliant rose colour, with 5 black lines from the base that are slightly branched; it afterwards changes to a dark purple. *Filaments* 10, united at the base, of a black colour, all bearing perfect anthers, which are also black. *Pollen* gray. *Germen* villous. *Style* very short, hairy. *Stigmas* 5, black and hairy at the base, spreading. *Description from a cultivated plant.*

For the above name and description we are obliged to Mr. Don, who was also kind enough to let us see native specimens, in which the flowers were considerably larger than in the cultivated plants. The specimen from which our drawing was taken, was sent to us by Sir R. C. Hoare, who raised it from seeds given him by A. B. Lambert, Esq. who received them from the Hymalayan mountains. We have also seen it at the nursery of Mr. W. Malcolm, Kensington, where it was raised from seeds received from Nepaul. We think it one of the handsomest species of the genus; its flowers also continue in bloom for several days, and as their colour changes considerably, it has a very curious appearance. We suspect it will endure our winters in the open air, but it will be safest to protect some under a frame, or in the greenhouse, until it has had a fair trial. It will strike freely from cuttings planted in pots in a mixture of turfy loam and peat: it may also be raised from seeds, which will ripen abundantly, if some pollen be rubbed on the stigmas when in bloom.





Dr. Smith del.

See by J. Schimper, 'Die Pflanzwelt', No. 1, 1021.

J. Müller sc.

HOAREA reticulata.

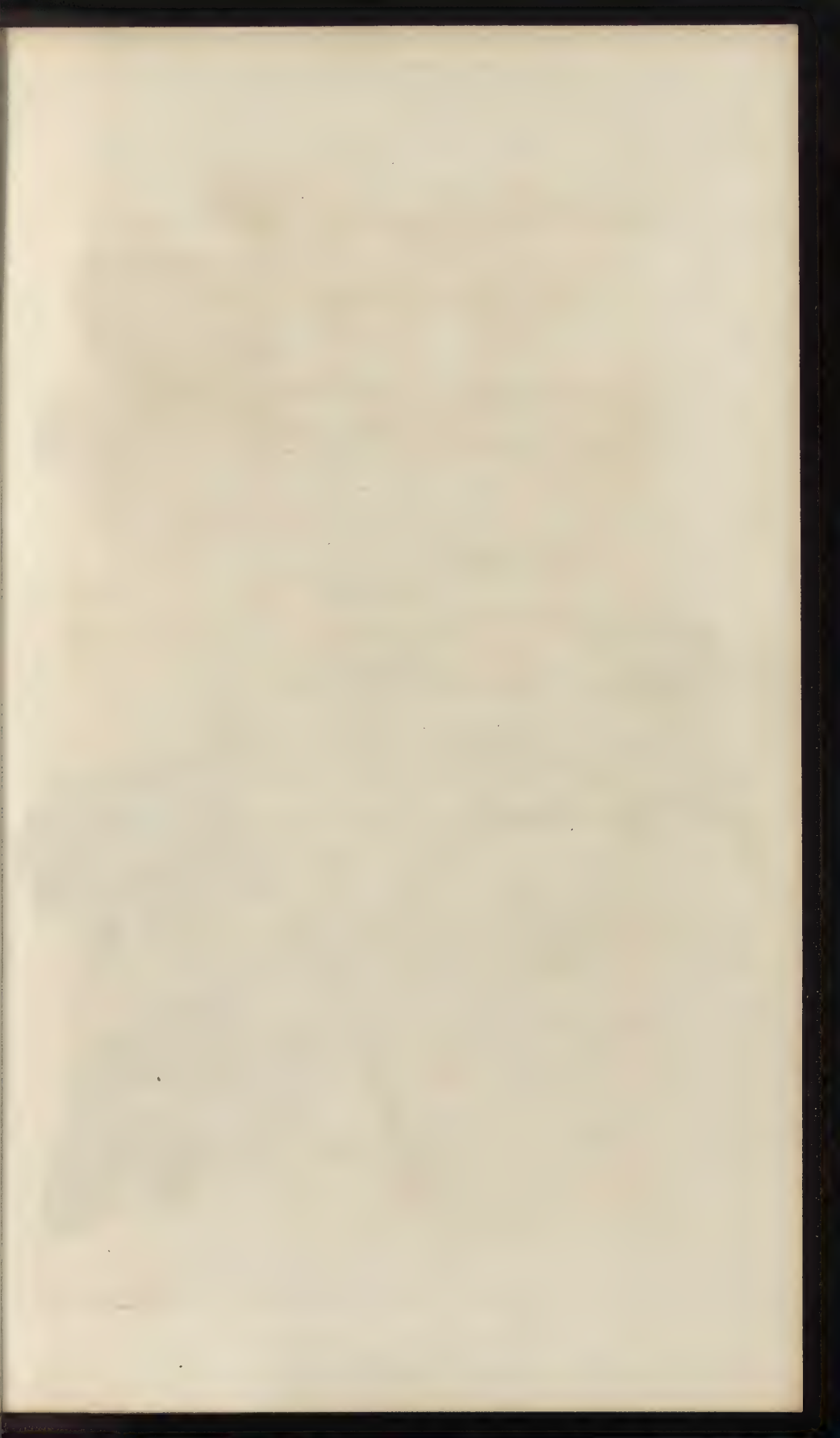
Netted-petaled Hoarea.

H. *reticulata*, umbella composita, foliis elliptico-lanceolatis oblongisve integerrimis pilosis margine revolutis, petalis lineari-spathulatis undulatis reflexis; superioribus medio macula magna notatis.

Root tuberous, not unlike a Turnep Radish, divided into several crowns at the upper part. *Stem* none. *Leaves* oblong or elliptically lanceolate, very hairy, with recurved points and revolute margins, of a light green colour. *Petioles* about the length of the leaf, slightly flattened on the upper side and convex on the lower, thickly covered with small white hairs, and longer horizontal ones scattered amongst them, as are the peduncles, bractes, and calyx. *Stipules* subulate, membranaceous, attached to the base of the petiole. *Scape* springing from the crowns of the root, producing several umbels of flowers, with many leafy bractes at the base of the peduncles. *Peduncles* nearly cylindrical. *Involucre* of several narrowly lanceolate acute bractes. *Calyx* 5-cleft, segments narrowly lanceolate, bluntish, with fringed membranaceous margins; upper segment erect, the others reflexed. *Nectariferous tube* almost sessile, a little flattened on both sides, about twice the length of the calyx. *Petals* 5, undulate, the two uppermost narrowly spathulate, reflexed above the middle, of a cream colour with a bright crimson spot in the centre, and 2 red lines from the base, joined at the upper part and slightly branched; lower ones linear, obtuse, revolute, cream-coloured, and elegantly reticulated with interrupted red lines. *Filaments* 10, united into a tube, 5 bearing anthers, sterile ones short and

curved inwards. *Pollen* orange-coloured. *Germen* villous. *Style* red, very hairy. *Stigmas* 5, reflexed.

Our drawing of this pretty little species was taken from a fine healthy plant at the nursery of Messrs. Colvill and Son, whose collection of the tuberous-rooted Geraniaceæ we believe exceeds every other in the country, and from it we expect many rare and curious subjects in the course of next spring and summer. The present plant had been lately received, with several other kinds, from the Cape. It thrives very well, like the rest of its relatives, in an equal mixture of turfy loam, peat, and sand, keeping it quite dry when in a dormant state. It may be increased by the little tubers from the roots, or by dividing the old one; these must be kept quite dry when first planted, till the wound is healed over; they may then be regularly watered: but the best method of increasing it is by seeds, which ripen in abundance if some pollen be applied to the stigmas when in full bloom.





Ranunculus

acris L.

Willd. Sp. Pl.

PELARGONIUM Husseyanum.

Lady Mary Hussey's Stork's-bill.

P. *Husseyanum*, umbellis multifloris, foliis oblatis quinquelobis denticulatis villosis; lobis rotundatis undulatis, bracteis pedicellis longioribus, petalis omnibus obovatis, tubo nectarifero calyce subtriplo longiori.

Pelargonium Husseyanum. *Nobis in Colv. Catal. p. 22. col. 2.*

Pelargonium Robertsoni. *Hortulanorum.*

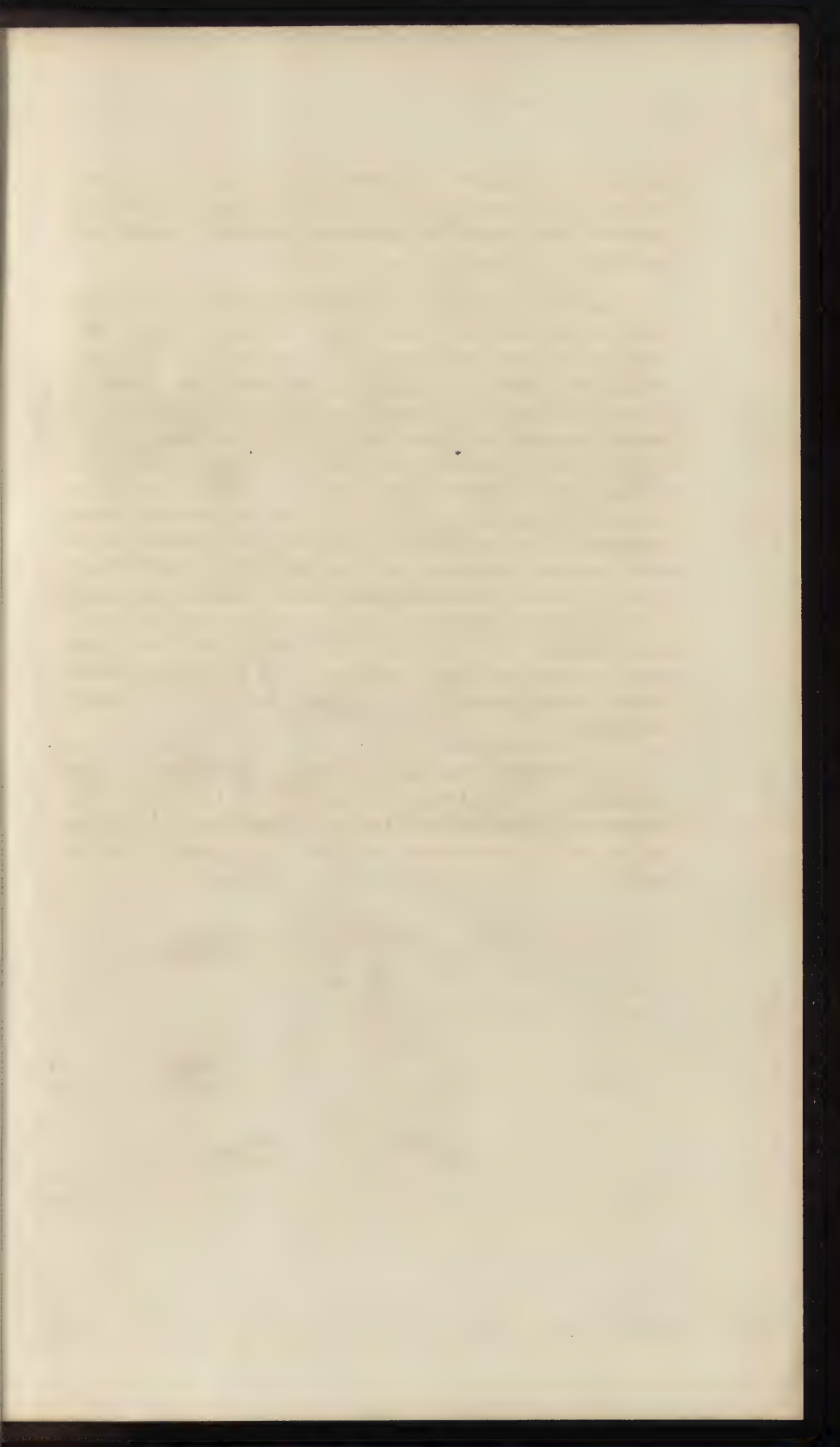
Brown's Duke of York Geranium. *Hortulanorum.*

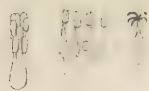
Stem shrubby, branching. *Branches* thickly clothed with unequal villous hairs, as is every other part of the plant except the corolla. *Leaves* of a dark green, wider than long, cordate, 5- or 7-lobed, reticulately veined, villous; lobes bluntly rounded, undulate, folding over each other, and toothed with short horizontal teeth. *Petioles* flattened and furrowed on the upper side and convex on the lower, widened at the base and apex. *Stipules* cordate, generally toothed, fringed and taper-pointed. *Peduncles* cylindrical, thickest at the base and point. *Umbels* many-flowered. *Involucre* of 7 bractes, which are ovate or widely lanceolate, concave, keeled and taper-pointed. *Pedicles* shorter than the involucre, about the length of the nectariferous tube. *Calyx* 5-cleft, segments very long, lanceolate, acute, reflexed or revolute when in flower, but erect after. *Nectariferous tube* short, flattened and channelled on each side, about three times shorter than the calyx. *Petals* 5, all obovate, of a dark purple; two upper ones widest, with a bright spot in the centre,

which joins numerous branched dark crimson lines from the base. *Filaments* 10, united at the base, 7 bearing anthers, and these are generally sterile. *Style* red, very hairy. *Stigmas* 5, red, revolute.

This fine plant is a hybrid production, and was raised from seed by Lady Mary Hussey, a great admirer of curious and handsome plants, and we have named it in compliment to her; we have also received it from Messrs. Brown and Co. nurserymen at Slough, under the name of *Brown's Duke of York*, and from Sir R. C. Hoare by that of *P. Robertsoni*: the only difference we can observe between the three, is a slight variation in the marking of the petals, but not of sufficient consequence to form distinct varieties, we therefore consider them all the same. It is a very strong and robust growing plant, flowering abundantly all the summer, and requires to be grown in a large-sized pot to have it in perfection. A mixture of rich turfy loam and peat suits it very well, and cuttings root readily, planted under hand-glasses, or in pots placed in a shady situation.

Our drawing was taken from a fine plant in the collection of Mr. Davey, King's Road, Chelsea. We suspect one of its parents to be *P. capitatum*, the other might be *P. Barringtonii*, or some one nearly related to it.





PELARGONIUM incisum.

Cut-leaved Stork's-bill.

P. incisum, umbellis plurifloris, foliis ternatis atroviridibus; foliolis distantibus tripartito-laciniatis, petalis flaccidis superioribus longioribus, tubo nectarifero subsessili calyce 3-plo longiori*.

Pelargonium incisum. Willden. *sp. pl.* 3. p. 686. Pers. *syn.* 2. p. 233. Hort. Kew. ed. 2. vol. 4. p. 182.

Geranium incisum. Andrews's *reposit.* 67? *malè*.

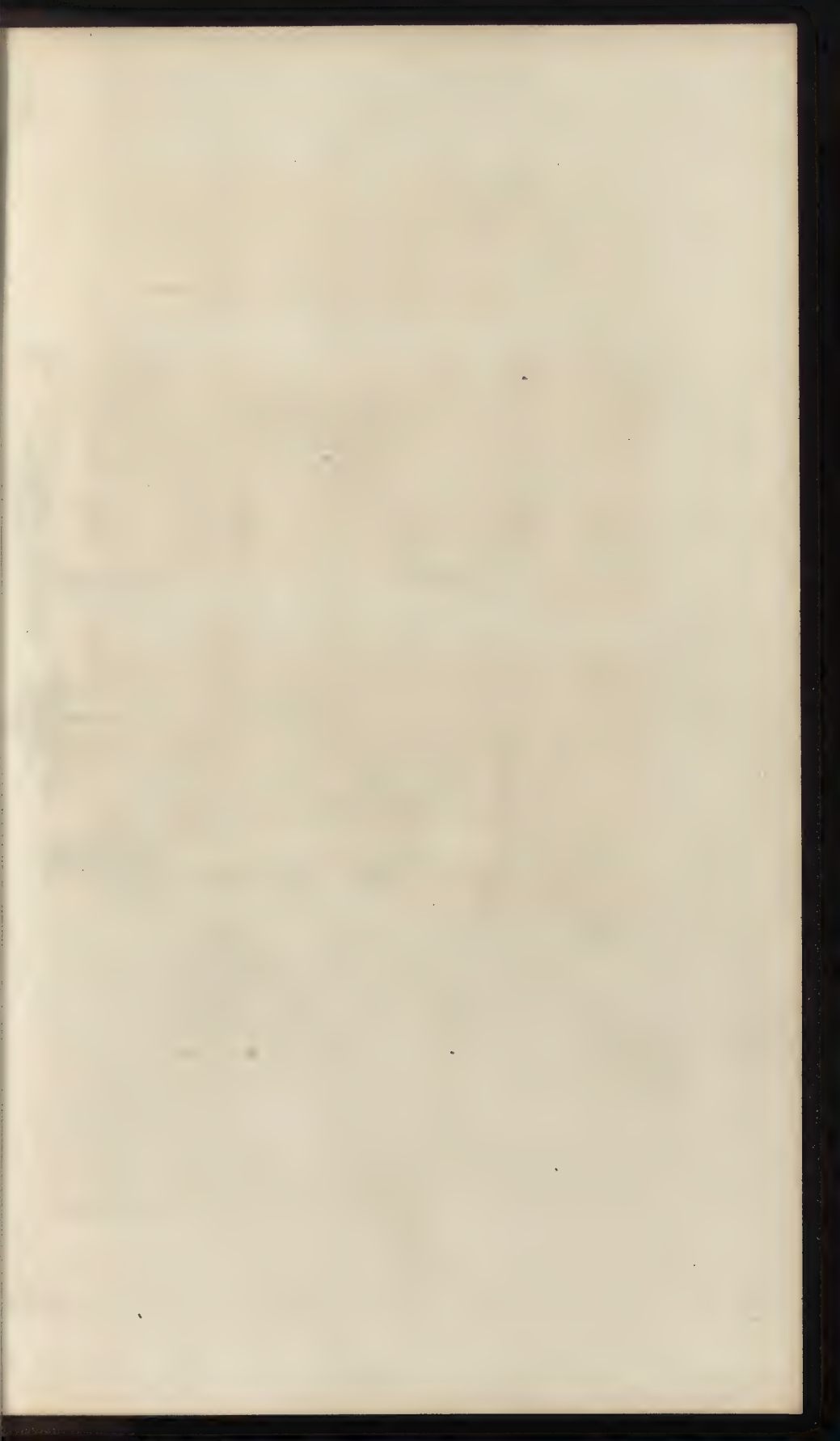
Stem shrubby, branching; *branches* generally 3-forked, thickly clothed with short villous hairs. *Leaves* ternate, of a dark green, slightly pubescent; *leaflets* spreading, at a distance from each other, 3-parted or deeply jagged; segments linear, obtuse, entire or rarely toothed. *Petioles* slender, slightly flattened on the upper side, dilated at the base, thickly clothed with soft villous hairs. *Stipules* very small, joined to the base of the footstalks. *Peduncles* several-flowered, cylindrical, curved upwards, thickly clothed with soft villous hairs. *Involucre* of 6 or 7 widely lanceolate short bractes. *Calyx* 5-cleft, segments unequal, lanceolate, reflexed, the upper one largest. *Nectariferous tube* nearly sessile, more than three times longer than the calyx, flattened on each side, thickly clothed with short pellucid hairs. *Petals* 5, linearly spathulate, flaccid, of a yellowish white colour, the two uppermost

* *P. canescens*, umbellis plurifloris, foliis ternatis canescentibus: foliolis aggregatis tripartito-laciniatis obtusis, petalis rigidis superioribus brevioribus, tubo nectarifero pedicellato calyce quadruplo longiori. *Geranium incisum*. Andrews's *reposit.* 67?

rather longest, reflexed, and marked at the base with a dark crimson patch. *Filaments* 10, united at the base, 7 bearing anthers, 3 sterile ones short and curved inwards. *Pollen* orange-coloured. *Germen* and *aristæ* hairy. *Style* red, hairy at the base and smooth above. *Stigmas* 5, reflexed.

This plant and the one we have described under the name of *P. canescens* are nearly related, and we suspect Mr. Andrews's figure was begun from the one and finished from the other, as it is not like either, but is an intermediate kind of thing, and we believe some of his other figures to be in the same predicament, particularly his *Geranium astragalifolium*, the leaves of which are correct enough, but the flowers are not like it or any other that we have seen; it seems to be quite imaginary.

Our drawing was taken from a plant in the superb collection of Robert H. Jenkinson, Esq. where we observed it in flower this summer in greater perfection than ever we had seen it before; it is rather more tender than some of the common kinds, but will thrive well if placed in an airy situation and not overwatered; and from its very distinct habit and foliage it makes a pleasing variety. The best soil for it is a mixture of turfy loam and peat, and a little sand to keep the compost open. Cuttings soon strike root if placed on a shelf in the greenhouse.





W. Smith del.

Painted by J. D. Gray 1770. Published in 1821.

W. Smith sc.

ERODIUM incarnatum.

Flesh-coloured Heron's-bill.

E. incarnatum pedunculis plurifloris; foliis scabris cordatis tripartitis ternatisve quinquelobis dentatis scabris, caule fruticuloso, petalis superioribus basi punctatis.

Erodium incarnatum. Willden. *sp. pl.* 3. p. 637. *Botan. magaz.* 261. *L'Hérit. geran. t.* 5. *Pers. syn.* 2. p. 225. *Hort. Kew. ed.* 2. v. 4. p. 158.

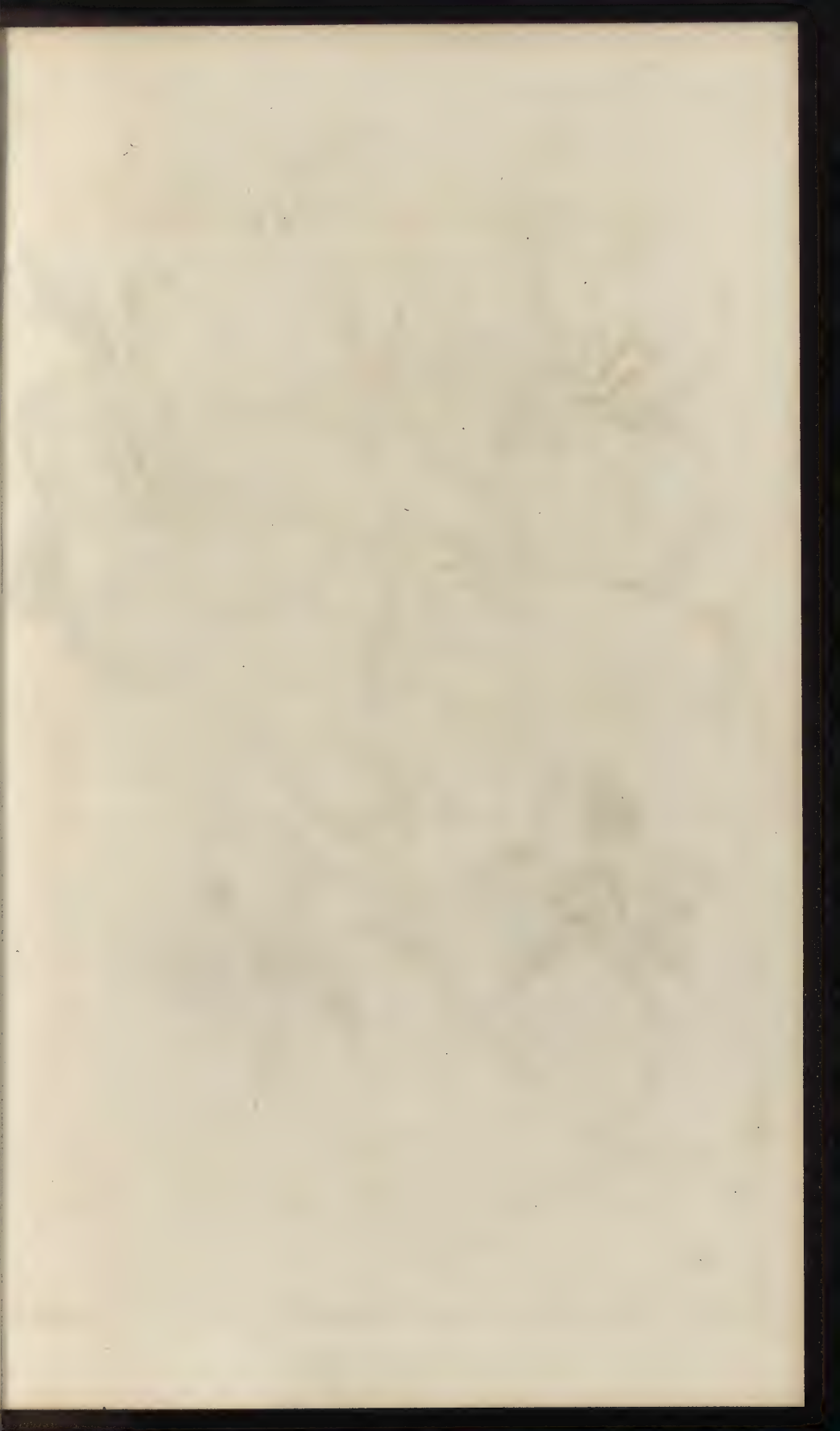
Geranium incarnatum. Cav. *diss.* 4. p. 223. *t.* 97. *f.* 3. *Andrews's geran. c. ic.*

Stem suffruticose, with few branches; *branches* short, thickly clothed with leaves, smooth and glossy; flowering branches elongated, bearing numerous umbels of flowers. *Leaves* rough, of a dark glossy green, cordate, not hairy, some ternate, others 3-parted or 5-lobed, deeply toothed with bluntish teeth that are terminated with a blunt callous mucro: lobes unequally and deeply cut and toothed. *Petioles* long and slender, flattened on the upper side and convex on the lower, very rigid. *Stipules* subulately linear joined to the base of the petioles, smooth and shining. *Peduncles* slender, clothed with very short hairs, generally 4-flowered. *Involucre* of 6 subulate fringed bractes. *Pedicels* gradually thickened upwards, curved inwards, slightly hairy. *Sepals* 5, lanceolate, acute, thickly covered with short villous hairs; the upper one widest. *Corolla* of 5 equal oblong blunt flesh-coloured petals, the two upper ones have 6 little dots at the base, in a bright red circle, above that is a circle of white, then another circle of a lighter red. *Filaments* 10, united

at the base, every other one bearing anthers, 5 sterile ones very short. *Anthers* red. *Pollen* orange-coloured. *Germen* villous. *Style* smooth of a purplish red. *Stigmas* 5, of the same colour, spreading.

This handsome and curious plant is a native of the Cape, and has been introduced to our gardens ever since the year 1787, though it is still far from being common: it has been generally supposed difficult to cultivate and as difficult to increase; but it will thrive as well as any of the tribe, if it be planted in an equal portion of turfy loam, peat, and sand, watering it only when quite dry. Cuttings will strike root freely, planted in the same kind of soil and set on a shelf in the greenhouse; they may also be increased by pieces of the roots planted in pots with their tops above the surface; these must be kept dry till the wound is dried up, they may then be regularly watered.

Our drawing was taken at the nursery of Messrs. Colvill and Son, where it continues in full bloom nearly all the year.





PELARGONIUM scutatum.

Shield-leaved Stork's-bill.

P. scutatum, umbellis plurifloris, foliis quinquelobis glanduloso-crenulatis pubescentibus carnosis subpeltatis, ramis prostratis tomentosis angulatis, petalis patentissimis.

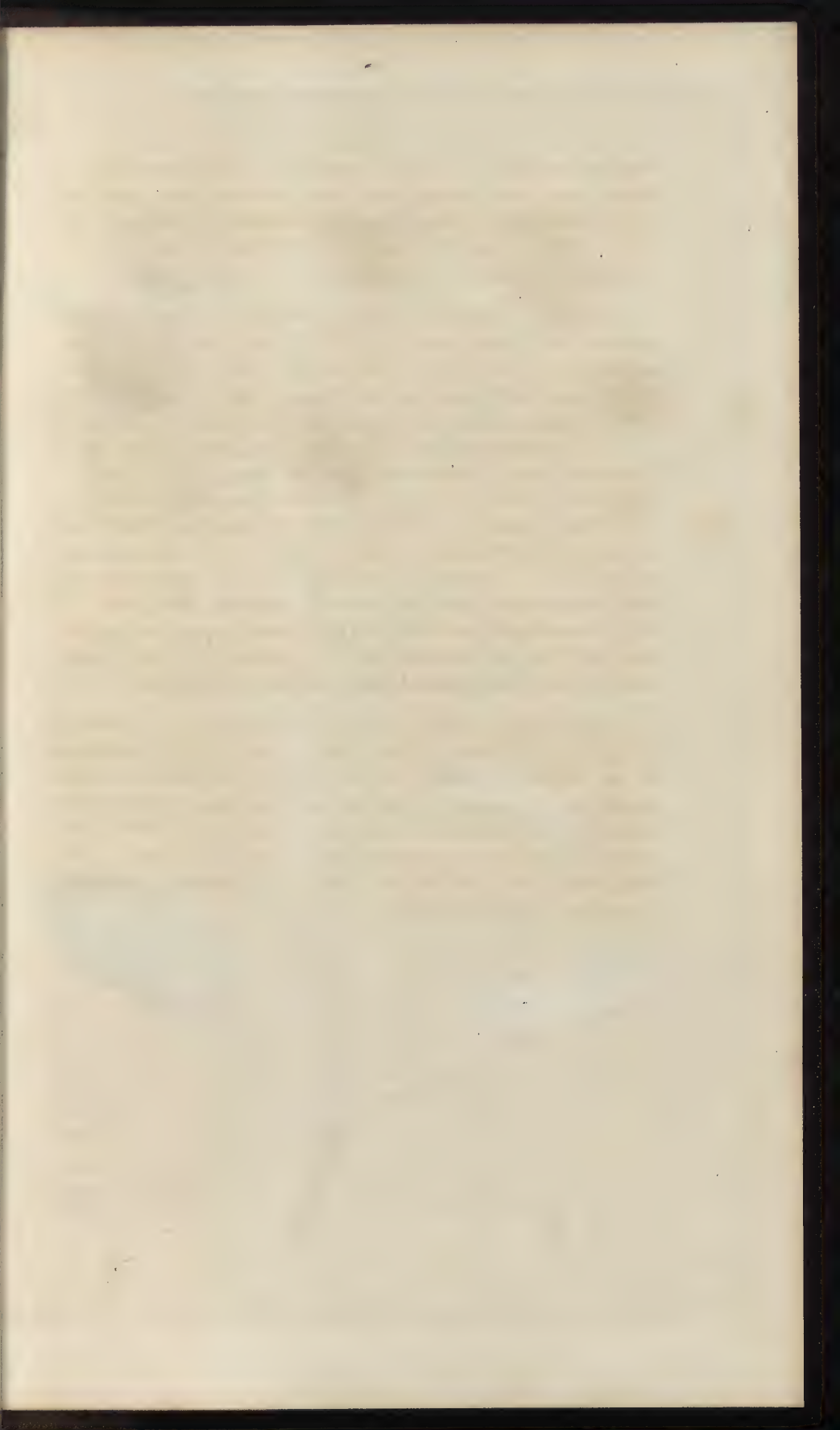
Pelargonium scutatum. Nob. in Colv. Catal. p. 22. col. 3.

Stem shrubby, much branched; *branches* prostrate if not supported, spreading to a great distance in all directions, slightly angular and densely clothed with soft woolly hairs, as are the petioles, peduncles, and calyx. *Leaves* peltate, upper ones only slightly so, 5-lobed, pubescent on both sides, glandularly crenulate, fleshy, concave with a deep angle running up each lobe, of a bright green colour with a dark brown circle near the base. *Petioles* slightly flattened on the upper side and convex on the lower, a little swollen at the base and apex. *Stipules* widely cordate, acute, pubescent. *Peduncles* thick and rigid, bearing umbels of from 4 to 8 flowers. *Involucre* of 6 or 7 bractes; *bractes* unequal, cordately ovate or lanceolate, bluntish. *Calyx* 5-cleft, segments unequal, concave, taper-pointed; upper one widely cordate, the others ovate or widely lanceolate. *Nectariferous tube* nearly sessile, very stout and rigid, slightly flattened and channelled on each side, about three times the length of the calyx. *Petals* 5, distinct, widely spreading, the two uppermost obcordate, white, with 2 handsome bright purple stripes from the base, which are slightly branched; lower ones widely obovate, attenuated at the base, white. *Filaments* 10, hairy, united at the base, 7

bearing anthers, 5 lower ones long and ascending, 2 upper ones very short and erect, sterile ones straight and subulate. *Pollen* orange-coloured. *Germen* vil-
lous. *Style* pale, very hairy. *Stigmas* 5, of a blush
colour, reflexed.

This very handsome plant is without doubt a real
species, and was raised by Mr. Colvill in 1819, from
seeds given him by E. Tattersall, Esq. who received
them from the Cape; on the paper of seeds was written,
Pelargonium, the leaves good for the cure of wounds.
This is the first season of its flowering, and it is a truly
desirable plant, either for training to a trellis, or to be
placed on a shelf with its branches hanging down; in
the latter situation it will not grow so strong nor bear
so many flowers on the umbel. As it is of rather a suc-
culent habit, care must be taken not to overwater it,
the pots should therefore be well drained: the best soil
for it is an equal portion of turfy loam, peat, and sand;
and cuttings soon strike root if planted in the same
kind of soil, and placed in a sheltered situation.

Our drawing was taken at the nursery of Messrs.
Colvill in July last. There are several slight varieties
of it, differing a little in the shape and colour of the
upper petals; but we think the present, one of the hand-
somest: it is preferable to most others of the tribe, by
reason of its flowers continuing so long in beauty. We
have seen one umbel last for near a month without
dropping any of its petals.





PHYMATANTHUS elatus.

Tall Wart-flower.

P. elatus, pedunculis subtrifloris, foliis lanceolatis canescentibus inciso-dentatis, petalis superioribus majoribus, caule fruticoso erecto, calycibus reflexis, tubo nectarifero calyce duplo breviori.

Phymatanthus elatus. *Nob. in Colv. Catal. p. 22. col. 3.*

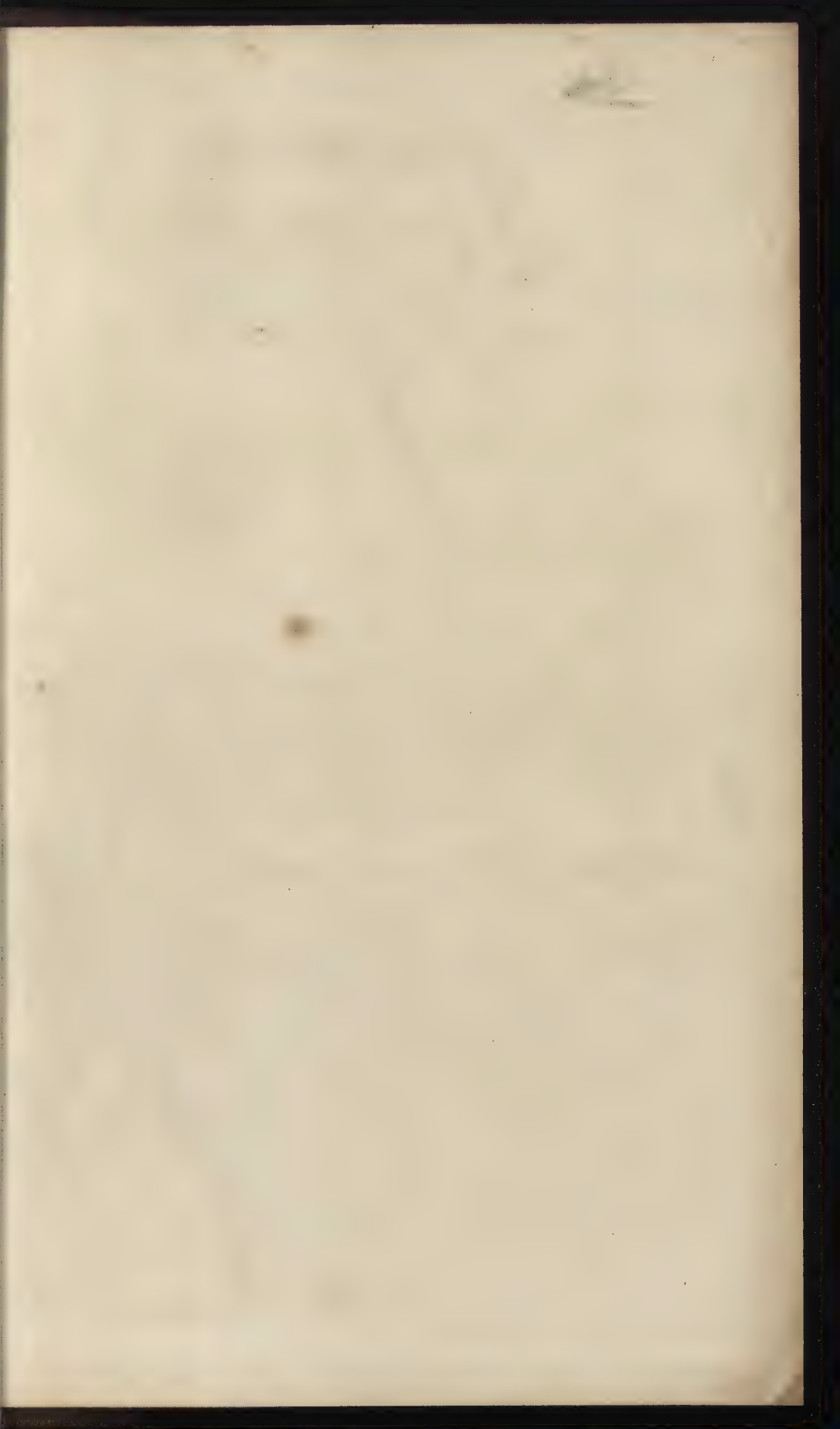
Geranium tricolor, arborea. Andrews's geran. c. ic.

Stem shrubby, branching, rough, and rugged, occasioned by the bases of the footstalks; *branches* slender, erect, thickly clothed with a short white pubescence. *Leaves* lanceolate, acute, unequally cut and sharply toothed, canescent, thickly covered with soft white down. *Petioles* long and slender, slightly flattened above and rounded below. *Stipules* subulate, bases persistent. *Peduncles* cylindrical, long and slender, generally 3-flowered, thickly clothed with short soft down, as are the pedicles, bractes, and calyx. *Involucre* of 6 subulate, concave, fringed bractes. *Pedicles* slender, curved upwards, the flowers leaning forwards. *Calyx* 5-cleft, segments broadly lanceolate, acuminate, reflexed. *Nectariferous tube* short, keeled on each side, about half the length of the calyx. *Petals* 5, unequal, the 2 uppermost largest, nearly orbicular, of a dark red colour, reticulately marked with numerous black lines, which gives the whole a dark velvety appearance: at the base, above the unguis, is a velvety black spot, swollen irregularly into little blisters or warts (not regularly warted as in *P. tricolor*): lower petals oblong or narrowly obovate, concave, white. *Filaments* 10, very hairy, united at the base, 5 only

bearing anthers; 5 fertile ones elongated, spreading; sterile ones short, erect, the 2 upper ones rather longest. *Germen* villous. *Style* purple, hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, reflexed.

This plant differs from *P. tricolor* in the following manner; this is tall and erect, *that dwarf and spreading*; this is covered with a short white pubescence, *that with long villous hairs*; the leaves of this are more regularly lanceolate, *not trifid*; its upper petals are largest, *not smallest as in that*; in this the filaments are connected into a short tube, *in that they are nearly distinct to the base*. We are not certain if it be a distinct species or a hybrid production; if the latter, it is probably intermediate between *P. tricolor* and *Campylia coronopifolia*. It is a handsome free-growing plant, and flowers the greater part of the year, if managed well; the best soil for it is an equal portion of turfy loam, peat, and sand, and the pots must be well drained with potsherds, that it may not get sodden with too much wet; watering over the leaves in winter is also very injurious to this and all other downy-leaved plants, as the wet lodges on them and makes them rot. Cuttings strike root freely if planted in pots in the same kind of soil, and placed on a shelf in the greenhouse.

Our drawing was taken from a plant in the collection of Robert H. Jenkinson, Esq. last summer.





Col. by J. Ridgway 175. Possibly Nov. 1, 1822.

P. Wille

PELARGONIUM bicolor.

Two-coloured Stork's-bill.

P. bicolor, umbellis multifloris, foliis cordatis trifidis undulatis hirsutis: segmentis lateralibus trilobis: superioribus quinquelobis obtusis dentatis, petalis planis distinctis, calycibus reflexis.

Pelargonium bicolor. *Willden. sp. pl.* 3. p. 680. *Pers. syn.* 2. p. 232. *Botan. magaz.* 201. *Hort. Kew. ed.* 2. vol. 4. p. 179.

Geranium bicolor. *Jacq. hort.* 3. p. 23. t. 39. *Cavan. diss.* 4. p. 248. t. 111. f. 1. *Andrews's geran. c. ic.*

α. *atrum*, petalis saturatoribus, marginibus albis vix conspicuis, *fig.* 1.

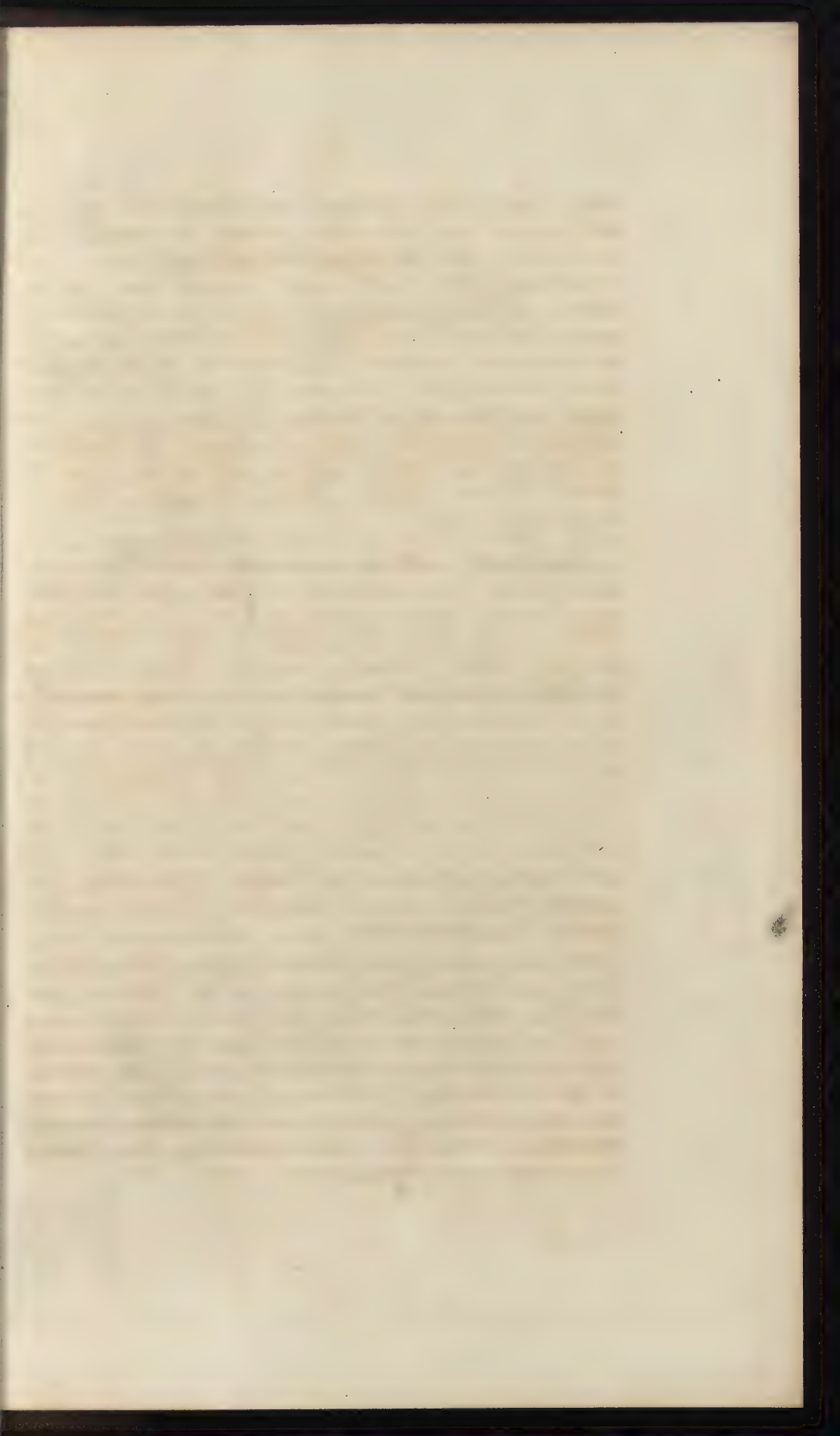
β. *pallidum*, petalis pallidioribus, marginibus albis conspicuioribus, *fig.* 2.

Stem shrubby, branching, knotted at the joints, of a brown colour; *branches* flexuose, slightly angular, thickly covered with unequal horizontal hairs. *Leaves* cordate, trifid, slightly undulate, bluntly toothed, and hairy on each side; *lower segments* generally 3-lobed: upper one 5-lobed and recurved at the point. *Petioles* flattened on the upper side, and convex on the lower, gibbous at the base, thickly covered with unequal horizontal hairs, as are the peduncles and calyx. *Stipules* reniform, entire or rarely toothed, ciliate, and terminated with a short mucro. *Peduncles* slightly angular. *Umbels* many-flowered. *Involucre* of one bracte, divided into several widely ovate bluntish segments, ending abruptly in an acute point. *Calyx* 5-cleft, segments widely lanceolate, bluntish, reflexed. *Nectari-*

ferous tube sessile, flattened and channelled on each side, longer than the calyx. *Petals* 5, cuneate, flat and distinct, the two uppermost widest: in *var. α.* of a reddish purple, with a dark velvety spot in the centre, and light margins, the upper petals have also several linear spots and lines from the base; in *var. β.* the petals are altogether lighter, with much broader and whiter margins. *Filaments* 10, united at the base, upper one flat and spathulate, like the others of this section, but terminated with an anther, which makes the seventh that bears anthers. *Pollen* of a brown colour. *Germen* villous. *Style* red, hairy. *Stigmas* 5, red and revolute.

This pretty species is an old inhabitant of our gardens, having been cultivated in this country, according to Hortus Kewensis, ever since the year 1778, when it was introduced by John Earl of Bute. There are two very distinct varieties, one with dark, the other with lighter coloured flowers: our figure represents the former, and we have added a single flower of the other at the bottom of the plate, to show the difference. It is a very desirable species for any collection, as it continues in flower nearly all the summer: the best mould for it is an equal portion of turfy loam, peat, and sand. Cuttings strike root readily, planted in the same kind of soil, and placed on a shelf in the greenhouse. Our drawing was taken at the collection of Robert H. Jenkinson, Esq. last summer.

We have seen two very curious plants belonging to this section in flower this season, at Mr. Colvill's nursery, that were received last year from the Cape; one of them is the *Geranium luridum* of Andrews, with leaves very much like *Hura crepitans*, and was named by us, in Mr. C.'s Catalogue, *P. huræfolium*, as we had not then seen its flowers; the other we believe to be *P. multiradiatum* of Sprengel, with leaves very like a large Fern, or an umbelliferous plant.





OTIDIA *carnosa*.*Fleshy-stalked Otidia.*

O. carnosa, umbellis plurifloris paniculatis, foliis sinuato-pinnatifidis ternatisve; laciniis oblongis obtusis apice inciso-dentatis, calycibus patentibus, tubo nectarifero calyce sesquolongiori.

Otidia carnosa. *Lindley MSS. Nob. in Colv. Catal.*
p. 21. col. 2.

Pelargonium carnosum. *Willden. sp. pl. 3. p. 686.*
Pers. syn. 2. p. 233. Hort. Kew. ed. 2. vol. 4. p. 182.

Geranium carnosum. *Cav. diss. 4. p. 266. t. 99. f. 1.*
Dill. elth. 153. t. 127. f. 154.

Stem shrubby, succulent, branching; *branches* swollen at the joints, where the stipules remain for a considerable time, but are not properly persistent, between the joints thickly clothed with a short hoary pubescence. *Leaves* scarcely pinnate, sometimes ternate or pinnatifid, others deeply divided, segments oblong, irregularly cut and toothed, with blunt rounded teeth, hairy on both sides. *Petioles* a little flattened and furrowed on the upper side, and rounded on the lower, thickly clothed with short soft pubescent hairs, as are the peduncles, pedicles, and calyx. *Stipules* cordately lanceolate, of a brown colour, scarcely persistent. *Peduncles* paniced, several-flowered. *Involute* of 6 or 7 short lanceolate downy bractes. *Pedicles* unequal in length, some longer than the nectariferous tube, others not so long. *Calyx* 5-cleft, segments spreading, spatulately lanceolate, concave, obtuse, fringed, the upper one largest. *Nectariferous tube* about half as long

again as the calyx, slightly flattened on each side and gibbous at the base. *Petals* 5, equal, linear, concave, obtuse, white, the 2 upper ones eared above the base. *Filaments* 10, united at the base, 5 only bearing anthers; of the sterile ones the 2 uppermost are longest, spatulate, and recurved, similar to *Campylia*, the 3 lower ones shorter, cloven at the point or emarginate, reflexed. *Pollen* dark orange-coloured. *Style* very hairy, purple. *Stigmas* 5, purple, spreading.

This plant, which is so very different from any we have yet published, is proposed by Mr. Lindley to form a distinct genus, which we have adopted; to it also belong *P. dasycaulon*, *P. ceratophyllum*, *P. alternans*, and some others; the whole tribe are of a shrubby succulent nature, and require a dry airy situation to have them in good health: when they are in a dormant state they should be kept quite dry, but they may be watered regularly when growing freely. The best soil for them is an equal quantity of turfy loam, peat, and sand, and the pots must be well drained, that the wet may pass off readily. Cuttings, when taken off, should be laid by till the wound is dried up, before planting, or they will be apt to rot.

Our drawing was taken from a plant in the collection of Robert H. Jenkinson, Esq. in August last.





JENKINSONIA tetragona.

Square-stalked Jenkinsonia.

J. tetragona, pedunculis bifloris, foliis cordato-reniformibus quinquelobis dentatis hirsutis carnosus; junioribus zonatis, ramis tetragonis carnosus, corollis 4 raro 5-petalis.

Pelargonium tetragonum. Willden. *sp. pl.* 3. p. 669.
Pers. syn. 2. p. 231. *Hort. Kew. ed.* 2. v. 4. p. 173.
L'Hérit. ger. t. 23. *Botan. magaz.* 136.
DC. pl. grass. 96.

Geranium tetragonum. Andrews's *geran. c. ic.*

Geranium trigonum. Scop. *del.* 1. p. 12. *t.* 5.

Stem shrubby, succulent, much branched; *branches* succulent, obtusely 4-sided, or sometimes 3-sided, jointed, smooth and glossy, of a bright green colour; when quite young, slightly hairy. *Leaves* fleshy, cordate or reniform, 5-lobed, toothed and fringed, thickly clothed with long villous hairs. *Petioles* nearly cylindrical, or slightly flattened on the upper side, dilated at the base, and thinly clothed with short pellucid hairs. *Stipules* cordate or widely ovate, blunt. *Peduncles* obtusely angular, 2-flowered and covered with short pellucid hairs. *Involucre* of 4 lanceolate, taper-pointed, concave bractes. *Calyx* 5-cleft, segments unequal, fringed, upper one widest, lanceolate, 3-nerved, erect, the others subulately linear, spreading. *Nectariferous tube* nearly sessile, more than twice the length of the calyx, slightly flattened on each side, and covered with short pellucid hairs. *Petals* 4, or rarely 5, the 2 upper ones much the largest, with a long unguis,

widely obovate, oblique, reflexed, back of a pale rose colour, front much lighter, with 2 bright purple lines from the base that are slightly branched; lower petals with long unguis, broadly spatulate at the point and oblique, white or pale blush. *Filaments* 10, united at the base, or the lower ones sometimes divided, 7 fertile ones declining, bent in the middle, their points ascending, sterile ones nearly equal, short and subulate. *Germen* villous. *Style* very long; bent like the filaments, hairy on the lower part and smooth on the upper. *Stigmas* 5, purple, reflexed.

In our account of *J. quinata*, *supra fol.* 79, we had proposed this as a distinct genus, under the name of *Chorisma*, but we find the principal character on which our generic distinction was fixed to be variable in different flowers on the same plant, some having the lower filaments divided to the base, and others connected into a tube; we therefore consider it a good species of *Jenkinsonia*: the species, also, which we enumerated in our account of *P. coriandrifolium*, *supra fol.* 34, will also rank very well as a different section of the same genus.

Our drawing was taken this summer at the extensive collection of Robert H. Jenkinson, Esq. The variegated variety at the side of the other, differs only in the variegation of its leaves, which, when grown luxuriantly, it loses altogether; the best method to preserve its variegation is to grow it in very sandy peat, but in our opinion it is handsomest in its green state: the best soil for it is an equal portion of loam, peat, and sand, the same as recommended for the other succulent species, and to be grown in a dry airy situation. Cuttings root readily, planted in the same kind of soil, and placed on a shelf in the greenhouse.





S. Walthe, del.

Publ. by J. Sedgwick 170 Piccadilly, Jan. 1. 1822.

S. Walthe, sc.

PELARGONIUM villosum.

Villous Stork's-bill.

P. villosum, umbellis plurifloris, foliis inferioribus ob-
latis inæqualiter cartilagineo-dentatis villosis basi
truncatis; superioribus rhomboideis, calycibus re-
flexis, tubo nectarifero calyce breviori.

Wood's Geranium majestum. *Hortulanorum*.

Stem shrubby, branching; *branches* thickly covered with long villous hairs, as is every other part of the plant except the corolla. *Leaves* roundish, wider than long, truncate at the base, deeply and unequally toothed with long sharp cartilaginous teeth; upper ones rhomboid. *Petioles* widely flattened and furrowed on the upper side and convex on the lower, dilated at the apex and curved inwards. *Stipules* lanceolate, taper-pointed, often toothed or forked. *Peduncles* longer than the leaves, several-flowered. *Involucre* of 6 or 7 elliptical or widely lanceolate acute bractes. *Pedicles* about the length of the bractes. *Calyx* 5-cleft, segments very long, widely lanceolate, reflexed. *Nectariferous tube* flattened on each side and gibbous at the base, shorter than the calyx. *Petals* 5, very large, 2 upper ones roundly ovate, rose-coloured, with a dark purple spot in the centre, which joins several purple lines from the base; lower petals widely obovate, rose-coloured. *Filaments* 10, united at the base, 7 bearing anthers. *Germen* villous. *Style* red, hairy on the lower and smooth on the upper part. *Stigmas* 5, red, reflexed.

This very fine plant is of hybrid origin, and was raised from seed by Mr. Wood, nurseryman at Hunt-

ingdon; from its villosity and cartilaginous teeth we suspect one of its parents to be *P. cardiifolium* or *P. angulosum*, but we are at a loss to guess at the other: we believe it to be the largest of the rose-coloured ones that has yet been raised; it requires to be kept in a dry airy situation in winter, as its leaves, if allowed to get damp, are very apt to turn mouldy and rot, owing to the dense wool with which they are covered. It thrives well in a mixture of turfy loam and peat, or any rich vegetable mould; and cuttings soon strike root, if planted in a sheltered situation.

Our drawing was taken at the nursery of Messrs. Colvill last summer.

SYSTEMATICAL INDEX TO VOLUME I.

	No.		No.
1. <i>Monsonia speciosa</i>	77.	53. <i>Pelargonium Baileyianum</i>	87.
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3. <i>Geranium palustre</i>	3.	55. <i>Pelargonium Boyleæ</i>	50.
4. <i>Geranium Wallichianum</i>	90.	56. <i>Pelargonium blandum</i>	4.
5. <i>Geranium Nepalense</i>	18.	57. <i>Pelargonium versicolor</i>	78.
6. <i>Geranium argenteum</i>	59.	58. <i>Pelargonium macranthum</i>	83.
7. <i>Erodium caucalisfolium</i>	6.	59. <i>Pelargonium grandiflorum</i>	29.
8. <i>Erodium hymenodes</i>	23.	60. <i>Pelargonium opulifolium</i>	53.
9. <i>Erodium incarnatum</i>	94.	61. <i>Pelargonium striatum</i>	1.
10. <i>Phymatanthus tricolor</i>	43.	62. <i>Pelargonium cordatum</i>	67.
11. <i>Phymatanthus elatus</i>	96.	63. <i>Pelargonium papilionaceum</i>	27.
12. <i>Campylia carinata, in obs.</i> }	43.	64. <i>Pelargonium Husseyanum</i>	92.
<i>Pelargonium carinatum</i> .. }	21.	65. <i>Pelargonium Breesianum</i>	64.
13. <i>Campylia holosericea</i>	75.	66. <i>Pelargonium oblatum</i>	35.
14. <i>Campylia blattaria</i>	88.	67. <i>Pelargonium eximium</i>	26.
15. <i>Otidia carnosia</i>	98.	68. <i>Pelargonium Vandesia</i>	7.
* <i>Hoarea</i> Sect. 1.		69. <i>Pelargonium melissinum</i>	5.
16. <i>Hoarea corydaliflora</i>	18.	70. <i>Pelargonium obscurum</i>	89.
17. <i>Hoarea setosa</i>	36.	71. <i>Pelargonium atrofusum</i>	82.
** Sect. 2.		72. <i>Pelargonium optabile</i>	62.
18. <i>Hoarea melanantha</i>	73.	73. <i>Pelargonium Lousadianum</i> ..	44.
19. <i>Hoarea atra</i>	72.	74. <i>Pelargonium Seymouria</i>	37.
20. <i>Hoarea reticulata</i>	91.	75. <i>Pelargonium obtusilobum</i>	8.
21. <i>Dimacria pinnata</i>	46.	76. <i>Pelargonium adulterinum</i>	22.
* <i>Pelargonium</i> . Sect. 1. † Div. 1.		77. <i>Pelargonium obtusifolium</i>	25.
22. <i>Pelargonium filipendulifolium</i> ..	85.	78. <i>Pelargonium Thynneæ</i>	74.
23. <i>Pelargonium lobatum</i>	51.	79. <i>Pelargonium pectinifolium</i>	66.
24. <i>Pelargonium bicolor</i>	97.	80. <i>Pelargonium bellulatum</i>	60.
25. <i>Pelargonium imbricatum</i>	65.	81. <i>Pelargonium scintillans</i>	28.
26. <i>Pelargonium sanguineum</i>	76.	82. <i>Pelargonium dumosum</i>	19.
27. <i>Pelargonium ardens</i>	45.	83. <i>Pelargonium lineatum</i>	16.
28. <i>Pelargonium pulchellum</i>	31.	84. <i>Pelargonium pustulosum</i>	11.
†† Div. 2.		85. <i>Pelargonium ornatum</i>	39.
29. <i>Pelargonium echinatum</i>	54.	86. <i>Pelargonium mixtum</i>	71.
30. <i>Pelargonium saepeflorens</i>	58.	87. <i>Pelargonium Hoareanum</i>	80.
31. <i>Pelargonium reniforme</i>	48.	88. <i>Pelargonium glaucum</i>	57.
32. <i>Pelargonium particeps</i>	49.	*** Sect. 3.	
33. <i>Pelargonium cortusæfolium</i> ..	14.	89. <i>Pelargonium incisum</i>	93.
††† Div. 3.		**** Sect. 4.	
34. <i>Pelargonium gibbosum</i>	61.	90. <i>Pelargonium australe</i>	68.
** Sect. 2.		91. <i>Pelargonium inodorum</i>	56.
35. <i>Pelargonium fulgidum</i>	69.	***** Sect. 5.	
36. <i>Pelargonium ignescens. α.</i>	2.	92. <i>Pelargonium humifusum</i>	42.
37. <i>Pelargonium ignescens. β. sterile</i> ..	55.	***** Sect. 6.	
38. <i>Pelargonium Colvillii</i>	86.	93. <i>Pelargonium elegans α et β</i> ..	36.
39. <i>Pelargonium pavoninum</i>	40.	***** Sect. 7.	
40. <i>Pelargonium rubescens</i>	30.	94. <i>Pelargonium pinguifolium</i>	52.
41. <i>Pelargonium Daveyanum</i>	32.	95. <i>Pelargonium scutatum</i>	95.
42. <i>Pelargonium calycinum. α, β, et γ</i> ..	81.	* <i>Jenkinsonia</i> Sect. 1.	
43. <i>Pelargonium Mostynæ</i>	10.	96. <i>Jenkinsonia tetragona</i>	99.
44. <i>Pelargonium Dennisianum</i>	20.	97. <i>Jenkinsonia quinata</i>	79.
45. <i>Pelargonium cardiifolium</i>	15.	** Sect. 2.	
46. <i>Pelargonium solubile</i>	24.	98. <i>Jenkinsonia coriandrifolia</i> ... }	34.
47. <i>Pelargonium multinerve</i>	17.	<i>Pelargonium coriandrifolium</i> }	
48. <i>Pelargonium villosum</i>	100.	99. <i>Ciconium hybridum</i>	63.
49. <i>Pelargonium floridum</i>	41.	<i>Pelargonium hybridum</i>	
50. <i>Pelargonium coarctatum</i>	70.	100. <i>Ciconium monstrum</i>	13.
51. <i>Pelargonium nervosum</i>	47.	<i>Pelargonium monstrum</i>	
52. <i>Pelargonium involucreatum α.</i>			
<i>maximum</i>	33.		

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	No.		No.
<i>Campylia blattaria</i>	88.	<i>Pelargonium grandiflorum</i>	29.
<i>Campylia carinata</i>	21.	<i>Pelargonium Hoareanum</i>	80.
<i>Campylia holosericea</i>	75.	<i>Pelargonium humifusum</i>	42.
<i>Ciconium hybridum</i>	53.	<i>Pelargonium Husseyanum</i>	32.
<i>Ciconium monstrum</i>	13.	<i>Pelargonium hybridum</i>	65.
<i>Dimacria pinnata</i>	46.	<i>Pelargonium ignescens. α.</i>	2.
<i>Erodium caucalisifolium</i>	6.	<i>Pelargonium ignescens. β. sterile</i> ..	55.
<i>Erodium hymenodes</i>	23.	<i>Pelargonium imbricatum</i>	65.
<i>Erodium incarnatum</i>	94.	<i>Pelargonium incisum</i>	93.
<i>Geranium argenteum</i>	59.	<i>Pelargonium inodorum</i>	56.
<i>Geranium ibericum</i>	84.	<i>Pelargonium involucreatum α. maxi-</i>	
<i>Geranium nepalense</i>	12.	<i>num</i>	33.
<i>Geranium palustre</i>	3.	<i>Pelargonium lineatum</i>	16.
<i>Geranium Wallichianum</i>	90.	<i>Pelargonium lobatum</i>	51.
<i>Hoarea atra</i>	72.	<i>Pelargonium Lousadianum</i>	44.
<i>Hoarea corydaliflora</i>	18.	<i>Pelargonium macranthon</i>	33.
<i>Hoarea melanantha</i>	73.	<i>Pelargonium melissinum</i>	5.
<i>Hoarea reticulata</i>	91.	<i>Pelargonium mixtum</i>	71.
<i>Hoarea setosa</i>	38.	<i>Pelargonium monstrum</i>	13.
<i>Jenkinsonia coriandrifolia</i>	34.	<i>Pelargonium Mostynæ</i>	10.
<i>Jenkinsonia quinata</i>	79.	<i>Pelargonium multinerve</i>	17.
<i>Jenkinsonia tetragona</i>	99.	<i>Pelargonium nervosum</i>	47.
<i>Monsonia speciosa</i>	77.	<i>Pelargonium oblatum</i>	35.
<i>Otidia carnosa</i>	98.	<i>Pelargonium obscurum</i>	89.
<i>Pelargonium adulterinum</i>	22.	<i>Pelargonium obtusifolium</i>	25.
<i>Pelargonium ardens</i>	45.	<i>Pelargonium obtusilobum</i>	8.
<i>Pelargonium atrofusum</i>	82.	<i>Pelargonium optabile</i>	62.
<i>Pelargonium australe</i>	68.	<i>Pelargonium opulifolium</i>	53.
<i>Pelargonium Baileyanum</i>	87.	<i>Pelargonium ornatum</i>	39.
<i>Pelargonium bellulum</i>	60.	<i>Pelargonium pannifolium</i>	9.
<i>Pelargonium bicolor</i>	97.	<i>Pelargonium papilionaceum</i>	27.
<i>Pelargonium blandum</i>	4.	<i>Pelargonium particeps</i>	49.
<i>Pelargonium Boyleæ</i>	50.	<i>Pelargonium pavoninum</i>	40.
<i>Pelargonium Breesianum</i>	64.	<i>Pelargonium pectinifolium</i>	66.
<i>Pelargonium calycinum α. β. γ.</i> ..	81.	<i>Pelargonium pinguifolium</i>	52.
<i>Pelargonium carinatum</i>	21.	<i>Pelargonium pulchellum</i>	31.
<i>Pelargonium cardiifolium</i>	15.	<i>Pelargonium pustulosum</i>	11.
<i>Pelargonium coarctatum</i>	70.	<i>Pelargonium reniforme</i>	48.
<i>Pelargonium Colvillii</i>	86.	<i>Pelargonium rubescens</i>	30.
<i>Pelargonium cordatum</i>	67.	<i>Pelargonium sæpeflorens</i>	58.
<i>Pelargonium coriandrifolium</i>	34.	<i>Pelargonium sanguineum</i>	76.
<i>Pelargonium cortusæfolium</i>	14.	<i>Pelargonium scintillans</i>	28.
<i>Pelargonium Daveyanum</i>	32.	<i>Pelargonium scutatum</i>	95.
<i>Pelargonium Dennisianum</i>	20.	<i>Pelargonium Seymouriæ</i>	37.
<i>Pelargonium dumosum</i>	19.	<i>Pelargonium solubile</i>	24.
<i>Pelargonium echinatum</i>	54.	<i>Pelargonium striatum</i>	1.
<i>Pelargonium elegans. α. β.</i>	36.	<i>Pelargonium Thynneæ</i>	74.
<i>Pelargonium eximium</i>	26.	<i>Pelargonium Vandesii</i>	7.
<i>Pelargonium filipendulifolium</i>	85.	<i>Pelargonium versicolor</i>	78.
<i>Pelargonium floridum</i>	41.	<i>Pelargonium villosum</i>	100.
<i>Pelargonium fulgidum</i>	69.	<i>Phymatanthus elatus</i>	96.
<i>Pelargonium gibbosum</i>	61.	<i>Phymatanthus tricolor</i>	43.
<i>Pelargonium glaucum</i>	57.		

ENGLISH INDEX TO VOLUME I.

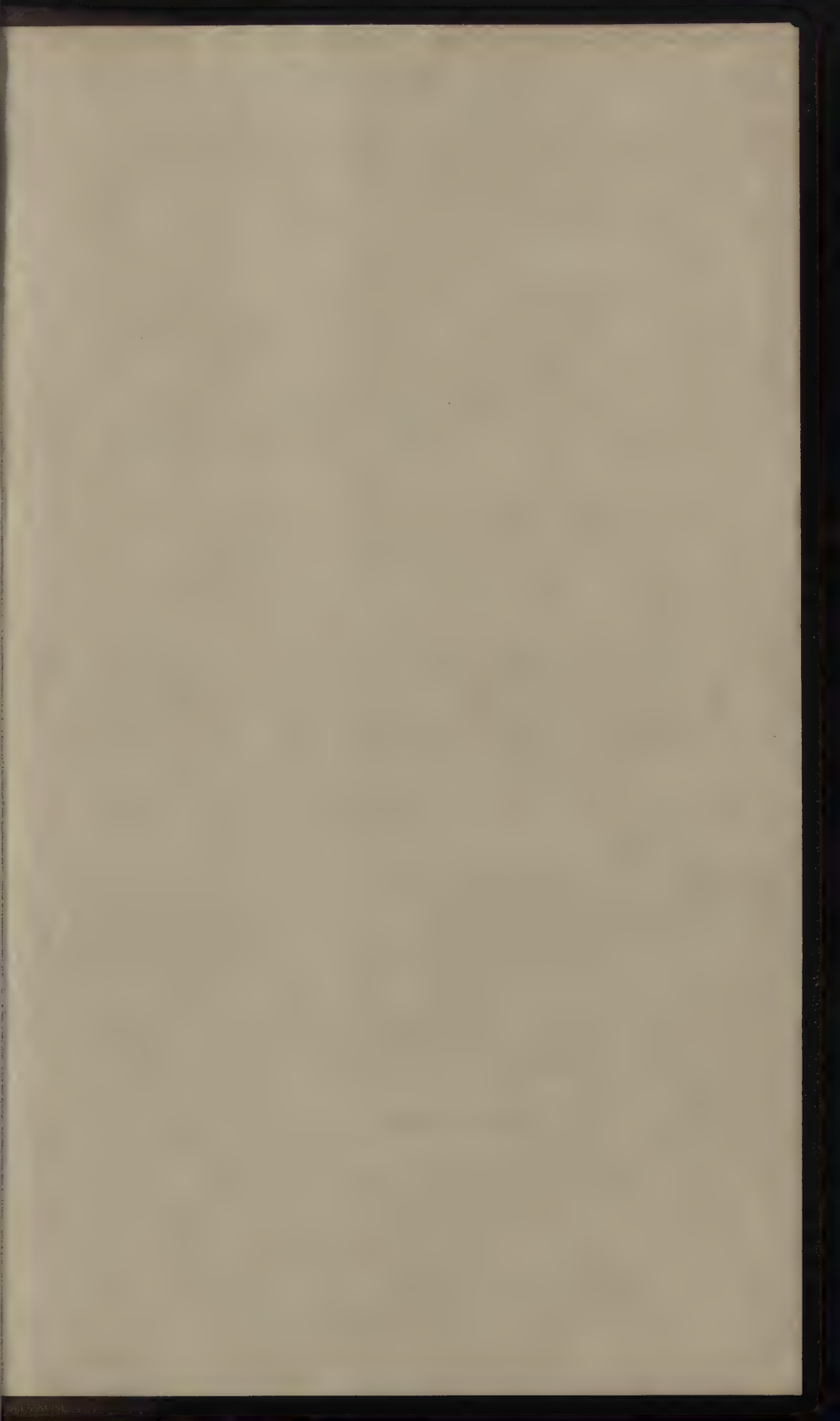
	No.		No.
Campylia. Downy-leaved	88.	Stork's-bill. Dropwort-leaved	85.
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- - - - - Silky-leaved	75.	- - - - - Fiery-flowered	2.
Crane's-bill. Iberian	84.	- - - - - Frequent-flowering	58.
- - - - - Marsh	3.	- - - - - Glaucous-leaved	57.
- - - - - Nepaul	12.	- - - - - Glowing	45.
- - - - - Silvery-leaved	59.	- - - - - Greasy-leaved	52.
- - - - - Wallich's	90.	- - - - - Great-flowered	29.
Dimacria. Wing-leaved	46.	- - - - - Guelder-Rose-leaved	53.
Heron's-bill. Bur-parsley-leaved	6.	- - - - - Heart-leaved	67.
- - - - - Flesh-coloured	94.	- - - - - Hoare's Fair Rosamond	80.
- - - - - Three-leaved	23.	- - - - - Hoary-trifid-leaved	22.
Hoarea. Black-flowered	73.	- - - - - Imbricate-petaled	65.
- - - - - Bristle-pointed	38.	- - - - - Keeled-stipuled	21.
- - - - - Dark-brown	72.	- - - - - Kidney-leaved	48.
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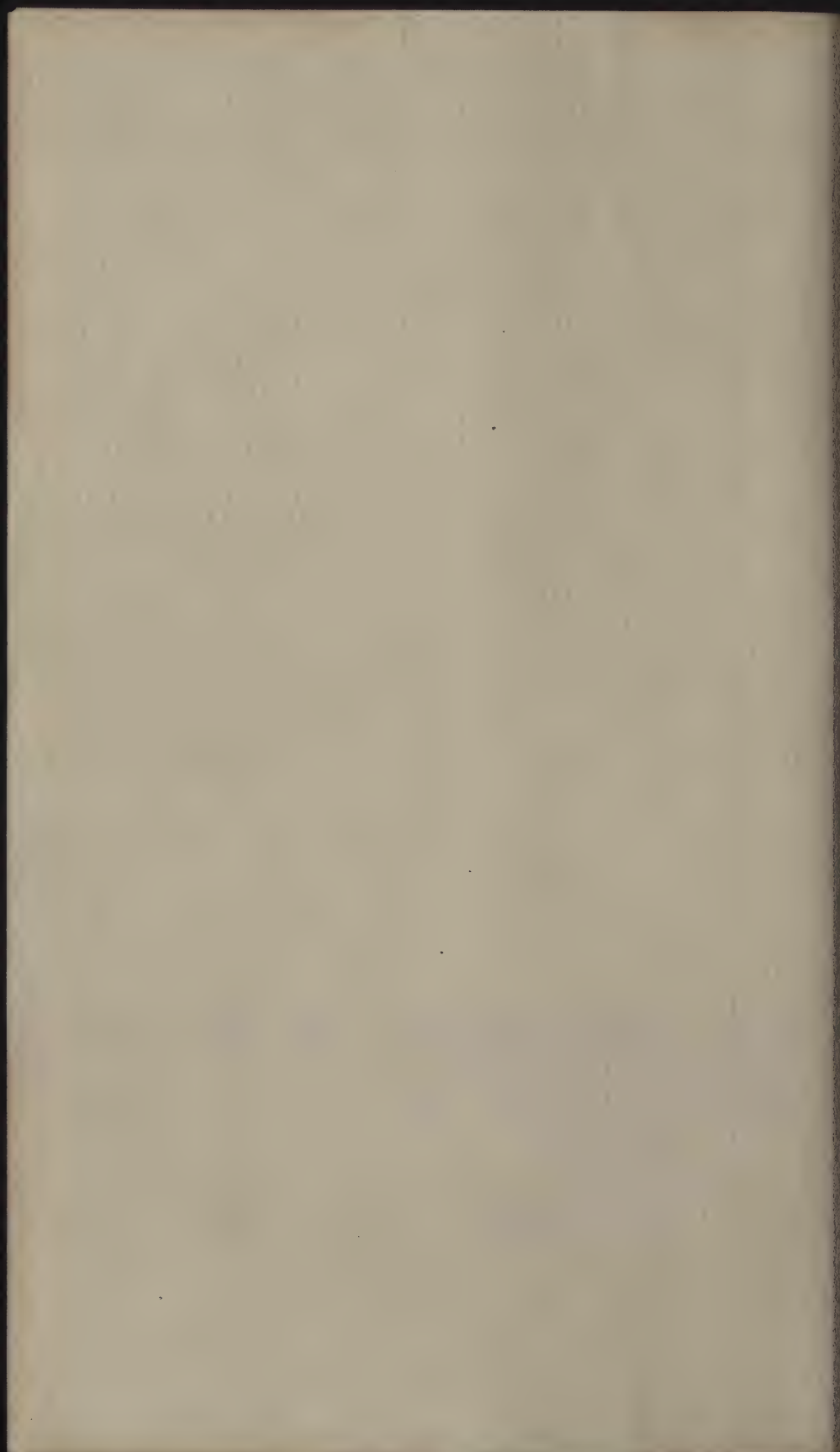
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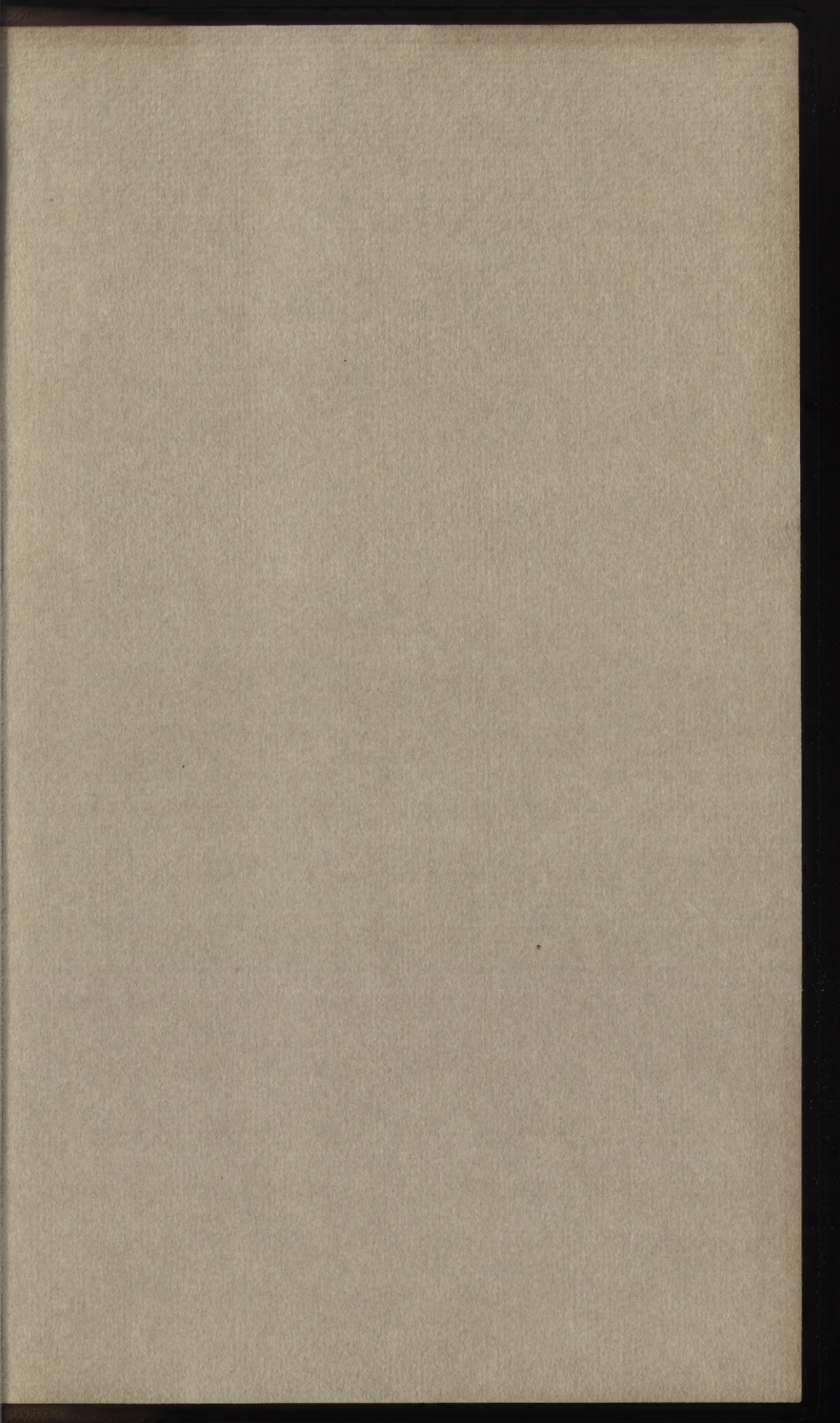
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